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Attorneys for Defendants
 CITY AND COUNTY OF SAN FRANCISCO;
 LONDON BREED, Mayor of San Francisco in her official capacity; and
 CAROL ISEN, Human Resources Director, City and County
 of San Francisco, in her official capacity

UNITED STATES DISTRICT COURT
 NORTHERN DISTRICT OF CALIFORNIA

SELINA KEENE, MELODY FOUNTILA,
 MARK MCCLURE,

Plaintiffs,

vs.

CITY and COUNTY OF SAN FRANCISCO;
 LONDON BREED, Mayor of San Francisco in
 her official capacity; CAROL ISEN, Human
 Resources Director, City and County of San
 Francisco, in her official capacity; DOES 1-
 100,

Defendants.

Case No. 22-cv-01587-JSW

**REQUEST FOR JUDICIAL NOTICE IN
 SUPPORT OF DEFENDANTS' OPPOSITION
 TO PLAINTIFFS' MOTION FOR
 PRELIMINARY INJUNCTION**

Hearing Date: July 8, 2022
 Time: 9:00 a.m.
 Place: Judge Jeffrey S. White
 Oakland Courthouse
 Courtroom 5 – 2nd Floor
 1301 Clay Street
 Oakland, CA 94612

Trial Date: None set.

Attachments: Exhibits A - G

1 In support of the Opposition of Defendants CITY AND COUNTY OF SAN FRANCISCO,
2 MAYOR LONDON BREED AND CAROL ISEN (“Defendants”) to Plaintiffs’ Motion for
3 Preliminary Injunction, Defendants hereby request that this Court take judicial notice of the following
4 documents pursuant to Sections 451 and 452 of the California Evidence Code:

5 1. Attached hereto as **Exhibit A** is a true and correct copy of the publicly available
6 webpage maintained by the Centers for Disease Control and Prevention and entitled “United States
7 COVID-19 Cases, Deaths, and Laboratory Testing (NAATs) by State, Territory, and Jurisdiction.” As
8 of May 31, 2022, this webpage is available at [https://covid.cdc.gov/covid-data-](https://covid.cdc.gov/covid-data-tracker/#cases_casesper100klast7days)
9 [tracker/#cases_casesper100klast7days](https://covid.cdc.gov/covid-data-tracker/#cases_casesper100klast7days).

10 2. Attached hereto as **Exhibit B** are true and correct copies of three publicly available
11 webpages maintained by the Centers for Disease Control and Prevention and entitled: 1) “Pfizer-
12 BioNTech COVID-19 Vaccine (also known as COMIRNATY) Overview and Safety.” As of May 31,
13 2022, this webpage is available at [https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Pfizer-BioNTech.html)
14 [vaccines/Pfizer-BioNTech.html](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Pfizer-BioNTech.html); 2) “Moderna COVID-19 Vaccine Overview and Safety.” As of May
15 31, 2022, this webpage is available at [https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Moderna.html)
16 [vaccines/Moderna.html](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Moderna.html); and, 3) “Johnson & Johnson’s Janssen COVID-19 Vaccine Overview and
17 Safety.” As of May 31, 2022, this webpage is available at [https://www.fda.gov/emergency-](https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine)
18 [preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine](https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine).

19 3. Attached hereto as **Exhibit C** are true and correct copies of four publicly available
20 webpages, as follows: 1) a webpage maintained by the Centers for Disease Control and Prevention,
21 entitled “Safety of COVID-19 Vaccines.” As of May 31, 2022, this webpage is available at
22 <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/safety-of-vaccines.html>; 2) a webpage
23 maintained by the U.S. Food and Drug Administration, entitled “Learn More About COVID-19
24 Vaccines from the FDA.” As of May 31, 2022, this webpage is available at
25 <https://www.fda.gov/consumers/consumer-updates/learn-more-about-covid-19-vaccines-fda>; 3) a
26 webpage maintained by the California Department of Public Health, entitled “Vaccines.” As of May
27 31, 2022, this webpage is available at <https://covid19.ca.gov/vaccines/>; and, 4) a webpage maintained
28

1 by the San Francisco Department of Public Health, entitled “Core Guidance for COVID-19.” As of
2 May 31, 2022, this webpage is available at <https://sf.gov/information/core-guidance-covid-19>.

3 4. Attached hereto as **Exhibit D** is a true and correct copy of a publicly available webpage
4 maintained by the Centers for Disease Control and Prevention and entitled “COVID-19 Vaccines
5 Work.” As of May 31, 2022, this webpage is available at [https://www.cdc.gov/coronavirus/2019-](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/effectiveness/work.html)
6 [ncov/vaccines/effectiveness/work.html](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/effectiveness/work.html).

7 5. Attached hereto as **Exhibit E** is a true and correct copy of the publicly available
8 webpage maintained by the California Department of Public Health and entitled “Unvaccinated and
9 vaccinated data.” As of May 31, 2022, this webpage is available at [https://covid19.ca.gov/state-](https://covid19.ca.gov/state-dashboard/#postvax-status)
10 [dashboard/#postvax-status](https://covid19.ca.gov/state-dashboard/#postvax-status).

11 6. Attached hereto as **Exhibit F** is a true and correct copy of the City and County of San
12 Francisco’s COVID-19 Vaccination Policy, last amended January 4, 2022.

13 7. Attached hereto as **Exhibit G** are true and correct copies of three publicly available
14 webpages, as follows: 1) a webpage maintained by the Los Angeles County Department of Public
15 Health, entitled “Covid-19 Vaccine and Fetal Cell Lines.” As of May 31, 2022, this webpage is
16 available at: [http://publichealth.lacounty.gov/media/Coronavirus/docs/vaccine/VaccineDevelopment_](http://publichealth.lacounty.gov/media/Coronavirus/docs/vaccine/VaccineDevelopment_FetalCellLines.pdf)
17 [FetalCellLines.pdf](http://publichealth.lacounty.gov/media/Coronavirus/docs/vaccine/VaccineDevelopment_FetalCellLines.pdf); 2) a webpage maintained by UCLA Health, entitled “COVID-19 Vaccine:
18 Addressing Concerns.” As of May 31, 2022, this webpage is available at: [https://www.uclahealth.org/](https://www.uclahealth.org/conditions-we-treat/coronavirus/addressing-concerns)
19 [conditions-we-treat/coronavirus/addressing-concerns](https://www.uclahealth.org/conditions-we-treat/coronavirus/addressing-concerns); and 3) a webpage maintained by National

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Geographic, entitled “Here are the facts about fetal cell lines and COVID-19 vaccines.” As of May 31, 2022, this webpage is available at: <https://www.nationalgeographic.com/science/article/here-are-the-facts-about-fetal-cell-lines-and-covid-19-vaccines>.

Dated: June 6, 2022

DENNIS J. HERRERA
City Attorney
WAYNE K. SNODGRASS
JAMES M. EMERY
KATE KIMBERLIN
Deputy City Attorneys

By: /s/ Kate G. Kimberlin
KATE G. KIMBERLIN

Attorneys for Defendants
CITY AND COUNTY OF SAN FRANCISCO,
MAYOR LONDON BREED and CAROL ISEN

EXHIBIT A

Centers for Disease
Control and Prevention[Español](#)
(Spanish)

COVID Data Tracker

Maps, charts, and data provided by CDC, updates daily by 8 pm ET

[COVID-19 Home >](#)

COVID Data Tracker will not update on Saturday, May 28, 2022, Sunday, May 29, 2022, and Monday, May 30, 2022. Updates will resume on Tuesday, May 31, 2022.



CDC recommends use of [COVID-19 Community Levels](#) to determine the impact of COVID-19 on communities and take action. [Community Transmission levels](#) are provided for healthcare facility use only.

United States at a Glance

Collapse —

United States

At a Glance

Cases Total

83,949,036

Case Trends



Deaths Total

1,002,067

Death Trends



Current Hosp.

14,224

Admission Trends



82.8% of People 5+ with At Least

One Vaccination

[Data Tracker Home](#)[Cases, Deaths, & Testing](#)[Case & Death Demographic Trends](#)[< Back to Cases, Deaths, & Testing](#)

United States COVID-19 Cases, Deaths, and Laboratory Testing (NAATs) by State,

Vaccination Distribution & Coverage
Vaccine Effectiveness & Breakthrough Surveillance
Health Equity
Pediatric
Pregnancy
People at Increased Risk
Wastewater Surveillance
Health Care Settings
Social Impact & Prevention
Variants & Genomic Surveillance
Antibody Seroprevalence
Other COVID-19 Data
Communications Resources
COVID-19 Home

Territory, and Jurisdiction

Maps, charts, and data provided by CDC, updated Mon-Sat by 8 pm ET[†]

[View Footnotes and Download Data](#)

TOTAL	7 DAY CASE	TOTAL
CASES	RATE PER	DEATHS
	100,000	
83,949,0	198.7	1,002,070

+45,433 New

CDC | Data as of: Tuesday, May 31, 2022 1:19 PM

Cases Posted: Tuesday, May 31, 2022 1:19 PM ET

+32 New

Deaths

View:

- ☒ Cases
- ☐ Deaths
- ☐ Tests Performed
- ☐ Percent Positive

Time period:

- ☒ Last 7 Days
- ☐ Since Jan 21, 2020

Metric:

- ☐ Count
- ☒ Rate per 100,000

This shows the number of COVID-19 cases for every 100,000 people over the last 7 days, allowing you to compare areas with different population sizes.

US COVID-19 7-Day Case Rate per 100,000, by State/Territory

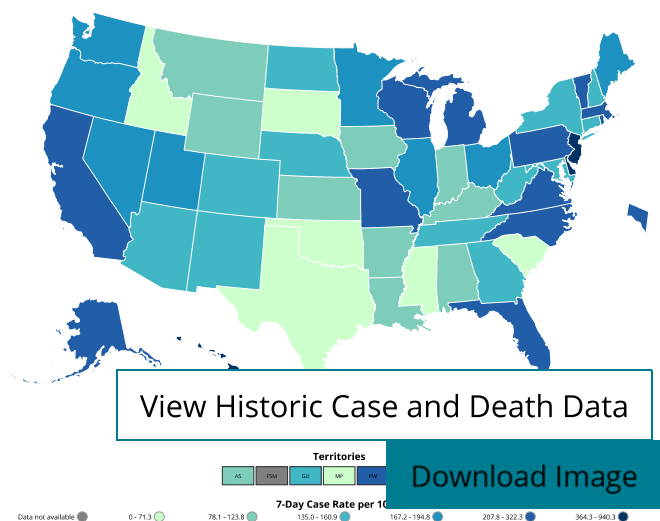
✉ Get Email Updates

Sign up to receive the COVID Data Tracker Weekly Review.

Email Address:

[What's this?](#)

Submit



Data Downloads and Footnotes

Expand each accordion to view data table and download data

Data Table for Cumulative Cases per 100k in Last 7 Days +

Footnotes +

Wondering what all the data mean?

CDC's new [COVID Data Tracker Weekly Review](#)

helps you stay up-to-date on the pandemic with weekly visualizations, analysis, and interpretations of key data and trends.

How does COVID-19 Spread?

Learn [more](#)

Information on US COVID-19 Cases Caused by Variants

Learn more [here](#)

Do you need information on testing?

Find it [here](#)

[View and Download COVID-19 Case Surveillance](#)

[Public Use Data with Geography](#)

Cite COVID Data Tracker

Centers for Disease Control and Prevention. COVID Data Tracker. Atlanta, GA: US Department of Health and Human Services, CDC; 2022, May 31. <https://covid.cdc.gov/covid-data-tracker>

COVID-19 Home >

All COVID-19 topics including prevention, travel, work, and school

HAVE QUESTIONS?



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[Vulnerability Disclosure Policy](#)

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[USA.gov](#)

[CDC Website Exit Disclaimer](#)

EXHIBIT B



COVID-19

Pfizer-BioNTech COVID-19 Vaccine (also known as COMIRNATY): Overview and Safety

Updated May 25, 2022

Recommended for People 5 Years and Older

[Stay up to date](#)

[Guidance for people who are immunocompromised](#)

General Information

Manufacturer: Pfizer, Inc., and BioNTech

Number of Shots: 2 doses in the primary series, given 3–8 weeks apart.

People ages 5 years and older who are moderately or severely immunocompromised should get a third dose at least 4 weeks after their second dose.

Booster Shots: People ages 5 years and older who received a Pfizer-BioNTech primary series should get a booster. Some people should get a second booster.

Type of Vaccine: [mRNA](#)

How Given: Shot in the muscle of the upper arm

Does NOT Contain: Eggs, preservatives, latex, metals

[See full list of ingredients](#)

Name: BNT162b2

Brand name: COMIRNATY

Pfizer–BioNTech (COMIRNATY) Name Change

Pfizer-BioNTech (COMIRNATY) received U.S. Food and Drug Administration (FDA) approval on August 23, 2021, for individuals ages 16 years and older. Once vaccines are approved by the FDA, companies can market the vaccines under brand names. COMIRNATY is the brand name for the Pfizer-BioNTech COVID-19 vaccine. After FDA approval, the FDA-authorized Pfizer-BioNTech COVID-19 vaccine for individuals ages 16 years and older was marketed as COMIRNATY. **No change was made to the vaccine's formula** with the name change.

The Pfizer-BioNTech vaccine label remains for individuals ages 5–15 years since the vaccine is authorized but not yet

approved for this age group.

Safety Data Summary

- COVID-19 vaccines have undergone—and will continue to undergo—the most intensive safety monitoring in U.S. history. Evidence from the hundreds of millions of COVID-19 vaccines already administered in the United States, and the billions of vaccines administered globally, demonstrates that they are [safe](#) and [effective](#).
- [Side effects](#) that happen within 7 days of getting vaccinated are common but are mostly mild. Some people have side effects that affect their ability to do daily activities.
- Side effects throughout the body (such as fever, chills, tiredness, and headache) are more common after the second dose of the vaccine.
- [Severe allergic reactions](#) to vaccines are rare but can happen.
- There is a rare risk of [myocarditis and pericarditis](#) associated with mRNA COVID-19 vaccination, mostly among males ages 12 through 39 years. The rare risk may be further reduced with a longer interval between the first and second dose. Learn more about [the timing for your second dose](#).

Learn more about [vaccine safety monitoring](#) after a vaccine is authorized or approved for use.

How Well the Vaccine Works

- Vaccines reduce the risk of COVID-19, including the risk of severe illness and death among people who are fully vaccinated.
- COVID-19 vaccines are effective, but studies have shown vaccine protection declines over time—especially with the Omicron variant. Learn more about getting a [booster](#) shot to enhance or restore protection against COVID-19.
- All FDA-approved or authorized COVID-19 vaccines provide substantial protection against COVID-19 hospitalization and death.
- CDC will continue to provide updates as we learn more.

Learn about demographic information for people ages [16 years and older](#) [↗](#) who participated in the trials.

Pfizer-BioNTech COVID-19 Vaccine Ingredients

All COVID-19 vaccine ingredients are safe. Nearly all of the ingredients in COVID-19 vaccines are ingredients found in many foods – fats, sugars, and salts. The Pfizer-BioNTech COVID-19 vaccine also contains a harmless piece of messenger RNA (mRNA). The COVID-19 mRNA [teaches](#) cells in the body how to create an [immune response](#) to the virus that causes COVID-19. This response helps protect you from getting sick with COVID-19 in the future. After the body produces an immune response, it discards all of the vaccine ingredients, just as it would discard any substance that cells no longer need. This process is a part of normal body functioning.

All COVID-19 vaccines are manufactured with as few ingredients as possible and with very small amounts of each ingredient. Each ingredient in the vaccine serves a specific purpose as seen in the table below.

Pfizer-BioNTech has updated the formulation of the Pfizer-BioNTech COVID-19 vaccine. The updated formulation has the same active ingredients as the previous formulation but uses different stabilizers (ingredients that help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored). These changes allow for easier shipping and longer storage of vaccines at refrigerator temperatures. This will help improve access to vaccines for people who need them and will decrease waste.

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The previous formulation for people ages 12 years and older is no longer being distributed, and once the doses of that formulation have been used, only the updated formulation will be available. Both formulations can be used interchangeably without any safety or effectiveness concerns. Check with your healthcare provider about which formulation they carry if you are concerned about any of the ingredients.

Ingredients in the original Pfizer–BioNTech COVID–19 vaccine for people ages 12 years and older

The original Pfizer-BioNTech COVID-19 vaccine for people ages 12 years and older contains the following ingredients:

Type of Ingredient

Type of Ingredient

Ingredient

Ingredient

Purpose

Purpose

Type of Ingredient

Messenger ribonucleic acid (mRNA)

Ingredient

- Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2

Purpose

Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.

Type of Ingredient

Lipids (fats)

Ingredient

- 2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide
- 1,2-distearoyl-sn-glycero-3-phosphocholine
- Cholesterol (plant derived)
- ((4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)

Purpose

Work together to help the mRNA enter cells.

Type of Ingredient

Salts and sugar

Ingredient

- Dibasic sodium phosphate dihydrate
- Monobasic potassium phosphate
- Potassium chloride (common food salt)
- Sodium chloride (basic table salt)
- Sucrose (basic table sugar)

Purpose

Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.

Messenger ribonucleic acid (mRNA):

Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2

Purpose

Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.

Lipids (fats):

- 2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide
- 1,2-distearoyl-sn-glycero-3-phosphocholine
- Cholesterol (plant derived)
- (4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)

Purpose

Work together to help the mRNA enter cells.

Salts and sugar:

- Dibasic sodium phosphate dihydrate
- Monobasic potassium phosphate
- Potassium chloride (common food salt)
- Sodium chloride (basic table salt)
- Sucrose (basic table sugar)

Purpose

Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.

Ingredients in children's Pfizer-BioNTech COVID-19 vaccine and the updated formulation for people ages 12 years and older

The Pfizer-BioNTech COVID-19 vaccine for people ages 5 through 11 years old and the updated formulation of the Pfizer-

Case 4:22-cv-01587-JSW Document 21-1 Filed 06/06/22 Page 16 of 113

BioNTech COVID-19 vaccine for people ages 12 years and older contain the following ingredients. While the ingredients are the same for all ages, people ages 12 years and older receive a higher dosage than children ages 5 through 11 years old.

Type of Ingredient

Type of Ingredient

Ingredient

Ingredient

Purpose

Purpose

Type of Ingredient

Messenger ribonucleic acid (mRNA)

Ingredient

- Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2

Purpose

Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.

Type of Ingredient

Lipids (fats)

Ingredient

- 2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide
- 1,2-distearoyl-sn-glycero-3-phosphocholine
- Cholesterol (plant derived)
- ((4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)

Purpose

Work together to help the mRNA enter cells.

Type of Ingredient

Sugar and acid stabilizers

Ingredient

- Sucrose (table sugar)
- Tromethamine

Tromethamine hydrochloride**Purpose**

Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.

Messenger ribonucleic acid (mRNA):

Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2

Purpose

Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.

Lipids (fats):

- 2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide
- 1,2-distearoyl-sn-glycero-3-phosphocholine
- Cholesterol (plant derived)
- ((4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)

Purpose

Work together to help the mRNA enter cells.

Sugar and acid stabilizers:

- Sucrose (table sugar)
- Tromethamine
- Tromethamine hydrochloride

Purpose

Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.

Ingredients that are NOT used in COVID-19 vaccines

The above table lists ALL ingredients in the Pfizer-BioNTech COVID-19 vaccine. There are NO ingredients in this vaccine beyond what is listed in the table. The Pfizer-BioNTech COVID-19 vaccine has:

- **No preservatives** like thimerosal or mercury or any other preservatives.
- **No antibiotics** like sulfonamide or any other antibiotics.
- **No medicines or therapeutics** like ivermectin or any other medications.
- **No tissues** like aborted fetal cells, gelatin, or any materials from any animal.
- **No food proteins** like eggs or egg products, gluten, peanuts, tree nuts, nut products, or any nut byproducts (COVID-19 vaccines are not manufactured in facilities that produce food products).
- **No metals** like iron, nickel, cobalt, titanium, rare earth alloys, or any manufactured products like microelectronics, electrodes, carbon nanotubes or other nanostructures, or nanowire semiconductors.
- **No latex.** The vial stoppers used to hold the vaccine also do not contain latex.

Related Pages

- › [Possible Side Effects](#)
- › [Safety of COVID-19 Vaccines](#)
- › [Benefits of Getting Vaccinated](#)
- › [How Vaccines Work](#)
- › [mRNA Vaccines](#)



For Healthcare Workers

[Pfizer-BioNTech COVID-19 Vaccine](#): General information, schedule, and administration overview.

Resources

[Pfizer-BioNTech COVID-19 Vaccine for People 12 Years of Age and Older Fact Sheet for Recipients and Caregivers \[PDF – 6 pages\]](#) [↗](#)

[Pfizer-BioNTech COVID-19 Vaccine for People 5 through 11 Years of Age Fact Sheet for Recipients and Caregivers \[PDF – 6 pages\]](#) [↗](#)

Last Updated May 25, 2022



COVID-19

Moderna COVID-19 Vaccine (also known as Spikevax): Overview and Safety

Updated May 25, 2022

Recommended for People 18 Years and Older

[Stay up to date](#)

[Guidance for people who are immunocompromised](#)

General Information

Manufacturer: ModernaTX, Inc.

Number of Shots: 2 doses in the primary series, given 4–8 weeks apart.

People ages 18 years and older who are moderately or severely immunocompromised should get a third dose at least 4 weeks after their second dose.

Booster Shots: People ages 18 years and older who received a Moderna primary series should get a booster. Some people should get a second booster.

Type of Vaccine: [mRNA](#)

How Given: Shot in the muscle of the upper arm

Does NOT Contain: Eggs, preservatives, latex, metals

[See full list of ingredients below](#)

Name: mRNA-1273

Brand name: Spikevax

Moderna (Spikevax) Name Change

Moderna (Spikevax) COVID-19 vaccine received U.S. Food and Drug Administration (FDA) approval on January 31, 2022, for individuals ages 18 years and older. Once vaccines are approved by the FDA, companies can market the vaccines under brand names. Spikevax is the brand name for the Moderna COVID-19 vaccine. The FDA-authorized Moderna COVID-19 vaccine for individuals ages 18 years and older will now be marketed as Spikevax. **No change has been made to the vaccine's formula** with the name change.

Safety Data Summary

COVID-19 vaccines have undergone—and will continue to undergo—the most intensive safety monitoring in U.S. history. Evidence from the hundreds of millions of COVID-19 vaccines already administered in the United States, and the billions of vaccines administered globally, demonstrates that they are [safe](#) and [effective](#).

[Side effects](#) that happen within 7 days of getting vaccinated are common but are mostly mild. Some people have reactions that affect their ability to do daily activities.

Side effects throughout the body (such as fever, chills, tiredness, and headache) are more common after the second dose of the vaccine.

[Severe allergic reactions](#) to vaccines are rare but can happen.

There is a rare risk of [myocarditis](#) and [pericarditis](#) associated with mRNA COVID-19 vaccination, mostly among males ages 12 through 39 years. The rare risk may be further reduced with a longer interval between the first and second dose. Learn more about [the timing for your second dose](#).

Learn more about [vaccine safety monitoring](#) after a vaccine is authorized or approved for use.

How Well the Vaccine Works

- Vaccines reduce the risk of COVID-19, including the risk of severe illness and death among people who are fully vaccinated.
- COVID-19 vaccines are effective, but studies have shown vaccine protection declines over time especially with the Omicron variant. Learn more about getting a [booster](#) shot to enhance or restore protection against COVID-19.
- All FDA-approved or authorized COVID-19 vaccines provide substantial protection against COVID-19 hospitalization and death.
- CDC will continue to provide updates as we learn more.

Learn about [demographic information for people who participated in the trials](#) [PDF – 54 pages] [↗](#).

Moderna COVID-19 Vaccine Ingredients

All COVID-19 vaccine ingredients are safe. Nearly all the ingredients in COVID-19 vaccines are ingredients found in many foods—fats, sugars, and salts. The Moderna COVID-19 vaccine also contains a harmless piece of messenger RNA (mRNA). The COVID-19 mRNA teaches cells in the body how to create an effective [immune response](#) to the virus that causes COVID-19. This response helps protect you from getting sick with COVID-19 in the future. After the body produces an immune response, it discards all the vaccine ingredients, just as it would discard any substance that cells no longer need. This process is a part of normal body functioning.

All COVID-19 vaccines are manufactured with as few ingredients as possible and with very small amounts of each ingredient. Each ingredient in the vaccine serves a specific purpose as seen in the table below.

In the past, there has been one formula for the Moderna COVID-19 vaccine. A full dose of this formula (0.5 mL) is used for the primary series, and a half dose (0.25 mL) is given as a booster. Now, Moderna makes a second formula for booster doses only. This formula is 0.5 mL like the primary dose vaccine. It also includes all of the same ingredients, but some of the ingredients are in different amounts.

Full list of ingredients

The Moderna COVID-19 vaccine contains the following ingredients:

Type of Ingredient

Type of Ingredient

Ingredient

Ingredient

Purpose

Purpose

Type of Ingredient

Messenger ribonucleic acid (mRNA)

Ingredient

- Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2

Purpose

Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.

Type of Ingredient

Lipids (fats)

Ingredient

- PEG2000-DMG: 1,2-dimyristoyl-rac-glycerol, methoxypolyethylene glycol
- 1,2-distearoyl-sn-glycero-3-phosphocholine
- BotaniChol® (non-animal origin cholesterol)
- SM-102: heptadecane-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate

Purpose

Work together to help the mRNA enter cells.

Type of Ingredient

Salt, sugar, acid stabilizers, and acid

Ingredient

- Sodium acetate
- Sucrose (basic table sugar)
- Tromethamine
- Tromethamine hydrochloride

Acetic acid (the main ingredient in white household vinegar)

Purpose

Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.

Messenger ribonucleic acid (mRNA):

Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2

Purpose

Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps to protect the body from getting sick with COVID-19 in the future.

Lipids (fats):

- PEG2000-DMG: 1,2-dimyristoyl-rac-glycerol, methoxypolyethylene glycol
- 1,2-distearoyl-sn-glycero-3-phosphocholine
- BotaniChol® (non-animal origin cholesterol)
- SM-102: heptadecane-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate

Purpose

Work together to help the mRNA enter cells

Salt, sugar, acid stabilizers, and acid:

- Sodium acetate
- Sucrose (basic table sugar)
- Tromethamine
- Tromethamine hydrochloride
- Acetic acid (the main ingredient in white household vinegar)

Purpose

Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.

Ingredients that are NOT used in COVID-19 vaccines

The above table lists ALL ingredients in the Moderna COVID-19 vaccine. There are NO ingredients in this vaccine beyond what is listed in the table. The Moderna COVID-19 vaccine has

- **No preservatives** like thimerosal or mercury or any other preservatives.
- **No antibiotics** like sulfonamide or any other antibiotics.
- **No medicines or therapeutics** like ivermectin or any other medications.
- **No tissues** like aborted fetal cells, gelatin, or any materials from any animal.
- **No food proteins** like eggs or egg products, gluten, peanuts, tree nuts, nut products, or any nut byproducts (COVID-19 vaccines are not manufactured in facilities that produce food products).
- **No metals** like iron, nickel, cobalt, titanium, rare earth alloys, or any manufactured products like microelectronics, electrodes, carbon nanotubes or other nanostructures, or nanowire semiconductors.
- **No latex.** The vial stoppers used to hold the vaccine also do not contain latex.

Related Pages

- › [Possible Side Effects](#)
- › [Safety of COVID-19 Vaccines](#)
- › [Benefits of Getting Vaccinated](#)
- › [How Vaccines Work](#)
- › [mRNA Vaccines](#)



For Healthcare Workers

[Moderna COVID-19 Vaccine](#): General information, schedule and administration overview.

More Information

[Moderna's COVID-19 Vaccine Fact Sheet for Recipients and Caregivers \[PDF – 6 pages\]](#) [↗](#)

[MMWR: Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Moderna COVID-19 Vaccine — United States, December 21, 2020–January 10, 2021](#)

[Safety and Reactogenicity Data](#)

Last Updated May 25, 2022

Janssen COVID-19 Vaccine

May 5, 2022: **The FDA limits use of Janssen COVID-19 Vaccine to certain individuals.** Read the [press release](https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-limits-use-janssen-covid-19-vaccine-certain-individuals) ([/news-events/press-announcements/coronavirus-covid-19-update-fda-limits-use-janssen-covid-19-vaccine-certain-individuals](https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-limits-use-janssen-covid-19-vaccine-certain-individuals)).

Fact Sheets and FAQs

Fact Sheet Translations

Información sobre las vacunas para el COVID-19 (<https://www.fda.gov/about-fda/fda-en-espanol/informacion-sobre-las-vacunas-para-el-covid-19>)

Janssen COVID-19 Vaccine is available under EUA to prevent COVID-19 in individuals 18 years of age and older for whom other FDA-authorized or approved COVID-19 vaccines are not accessible or clinically appropriate, and individuals 18 years of age and older who elect to receive the Janssen COVID-19 Vaccine because they would otherwise not receive a COVID-19 vaccine. For these individuals, the Janssen COVID-19 vaccine is authorized as a:

- Single primary vaccination dose
- Single booster dose at least two months after completing primary vaccination with the vaccine
- Heterologous (or “mix and match”) single booster dose following completion of primary vaccination with a different available COVID-19 vaccine. The dosing interval for the heterologous booster dose is the same as that authorized for a booster dose of the vaccine used for primary vaccination. View [COVID-19 vaccine booster eligibility](https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/do-i-qualify-covid-19-vaccine-booster-and-which-one) ([/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/do-i-qualify-covid-19-vaccine-booster-and-which-one](https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/do-i-qualify-covid-19-vaccine-booster-and-which-one)).

On February 27, 2021, FDA issued an EUA for the Janssen COVID-19 Vaccine to prevent COVID-19 in individuals 18 years of age and older.

On May 5, 2022, the U.S. Food and Drug Administration limited the authorized use of the Janssen COVID-19 Vaccine to individuals 18 years of age and older for whom other authorized or approved COVID-19 vaccines are not accessible or clinically appropriate, and to individuals 18 years of age and older who elect to receive the Janssen COVID-19 Vaccine because they would otherwise not receive a COVID-19 vaccine.

Emergency Use Authorization Status:

Authorized

Name:

Janssen COVID-19 Vaccine

Manufacturer:

Janssen Biotech Inc.,
a Janssen Pharmaceutical Company of Johnson & Johnson

Authorized Use

For the prevention of Coronavirus Disease 2019 (COVID-19) in individuals 18 years of age and older for whom other FDA-authorized or approved COVID-19 vaccines are not accessible or clinically appropriate, and in individuals 18 years of age and older who elect to receive the Janssen COVID-19 Vaccine because they would otherwise not receive a COVID-19 vaccine.

Common Side Effects

The most commonly reported side effects were pain at the injection site, headache, fatigue, muscle aches and nausea. Most of these side effects occurred within 1-2 days following vaccination and were mild to moderate in severity and lasted 1-2 days. [Learn more \(/media/146305/download\).](#)

Fact Sheets (English) and FAQs

Information	Last Updated
Fact Sheet for Healthcare Providers Administering Vaccine (/media/146304/download)	May 5, 2022
Fact Sheet for Recipients and Caregivers (/media/146305/download)	May 5, 2022
Frequently Asked Questions on the Janssen COVID-19 Vaccine (/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine-frequently-asked-questions)	May 5, 2022

Regulatory Information

Information	Date
Decision Memorandum (/media/158318/download)	May 5, 2022
Letter of Authorization (https://www.fda.gov/media/146303/download) (Reissued)	May 5, 2022
Concurrence Letter (/media/157554/download)	April 7, 2022
Concurrence Letter (/media/156787/download)	March 4, 2022
Letter Granting EUA Amendment (/media/155862/download)	January 31, 2022
Letter Granting EUA Amendment (https://www.fda.gov/media/155391/download)	January 11, 2022
Addendum to Jan 7, 2022 Review Memorandum (/media/155467/download)	January 7, 2022
Review Memorandum (/media/155466/download)	January 7, 2022
Decision Memorandum Addendum (/media/155547/download)	January 6, 2021
Decision Memorandum Addendum (/media/155236/download)	December 30, 2021
Addendum to Dec. 22, 2021 Review Memorandum (/media/155671/download)	December 22, 2021
Review Memorandum (/media/155670/download)	December 22, 2021
Letter Granting EUA Amendment (/media/154870/download)	December 14, 2021
Letter of Authorization (/media/146303/download) (Reissued)	November 19, 2021
Decision Memorandum Addendum (/media/154359/download)	November 18, 2021

Information	Date
FDA Decision Memorandum Addendum (/media/153944/download)	November 5, 2021
Concurrence Letter (/media/153931/download)	November 5, 2021
Memorandum to the File (/media/153439/download)	October 20, 2021
Decision Memorandum (/media/153441/download)	October 20, 2021
Advisory Committee Meeting Information (/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-october-14-15-2021-meeting-announcement)	October 15, 2021
FDA Decision Memorandum Addendum (/media/152567/download)	September 29, 2021
Concurrence Letter (/media/152547/download)	September 29, 2021
FDA Decision Memorandum Addendum (/media/152170/download)	September 14, 2021
Concurrence Letter (/media/152171/download)	September 14, 2021
FDA Decision Memorandum Addendum (/media/152100/download)	September 8, 2021
Concurrence Letter (https://www.fda.gov/media/152046/download)	September 8, 2021
Letter Granting EUA Amendment (/media/151868/download)	August 30, 2021
Concurrence Letter (/media/151141/download) (shelf life extension to 6 months)	July 28, 2021
FDA Decision Memorandum Addendum (/media/150745/download)	July 13, 2021
Concurrence Letter (/media/150743/download)	July 13, 2021
Letter Granting EUA Amendment (/media/150723/download)	July 12, 2021
Concurrence Letter (/media/150136/download) (Reissued)	July 2, 2021
Concurrence Letter (/media/150163/download) (Reissued)	July 2, 2021
Concurrence Letter (/media/150567/download)	July 2, 2021
FDA Decision Memorandum Addendum (/media/150571/download)	July 1, 2021
FDA Decision Memorandum Addendum (/media/150139/download)	June 15, 2021
FDA Decision Memorandum (/media/150081/download)	June 11, 2021
Concurrence Letter (/media/150064/download) (concurring with the extension of the shelf-life of Janssen COVID-19 Vaccine stored at 2-8°C, from 3 months to 4.5 months)	June 10, 2021
Letter Granting EUA Amendment (/media/147865/download)	April 23, 2021
Letter Granting EUA Amendment (/media/147194/download)	March 29, 2021
FDA Decision Memorandum (/media/146338/download)	February 27, 2021
Advisory Committee Meeting Information (/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-february-26-2021-meeting-announcement)	February 26, 2021

Information	Date
<h2>Media Materials and Webcasts</h2>	
Information	Date
Press Release (/news-events/press-announcements/coronavirus-covid-19-update-fda-limits-use-janssen-covid-19-vaccine-certain-individuals)	May 5, 2022
Press Release (/news-events/press-announcements/coronavirus-covid-19-update-fda-takes-additional-actions-use-booster-dose-covid-19-vaccines)	October 20, 2021
Media Call (https://youtu.be/rou7tf4vaUU) ↗ (http://www.fda.gov/about-fda/website-policies/website-disclaimer)	October 20, 2021
Advisory Committee Meeting Webcast (https://youtu.be/c-H40GrvWz4) ↗ (http://www.fda.gov/about-fda/website-policies/website-disclaimer)	October 15, 2021
Press Release (/news-events/press-announcements/fda-and-cdc-lift-recommended-pause-johnson-johnson-janssen-covid-19-vaccine-use-following-thorough)	April 23, 2021
Joint FDA and CDC Press Conference (https://youtu.be/Nf_OuB1rBi0) ↗ (http://www.fda.gov/about-fda/website-policies/website-disclaimer)	April 23, 2021
Joint CDC and FDA Statement (/news-events/press-announcements/joint-cdc-and-fda-statement-johnson-johnson-covid-19-vaccine)	April 13, 2021
Joint FDA and CDC Media Call (https://youtu.be/_ELXnGYgsJY) ↗ (http://www.fda.gov/about-fda/website-policies/website-disclaimer)	April 13, 2021
Media Call (https://youtu.be/m_eSKpm19zk) ↗ (http://www.fda.gov/about-fda/website-policies/website-disclaimer)	February 27, 2021
Press Release (/news-events/press-announcements/fda-issues-emergency-use-authorization-third-covid-19-vaccine)	February 27, 2021
Advisory Committee Meeting Webcast (https://youtu.be/Qd7mICD-rEA) ↗ (http://www.fda.gov/about-fda/website-policies/website-disclaimer)	February 26, 2021

Translations of the Fact Sheet for Recipients and Caregivers

接受者和护理者须知 (/media/146685/download) (May 5, 2022)	中文 (Chinese, Simplified)
환자와 의료진을 위한 정보지 (/media/146839/download) (May 5, 2022)	한국어 (Korean)
HOJA INFORMATIVA PARA RECEPTORES Y PROVEEDORES DE CUIDADO (/media/146762/download) (May 5, 2022)	Español (Spanish)

FACT SHEET PARA SA MGA TATANGGAP AT MGA TAGAPAG-ALAGA (/media/146797/download)
(May 5, 2022)

Tagalog (Tagalog)

TỜ THÔNG TIN CHO NGƯỜI NHẬN VÀ NHỮNG NGƯỜI CHĂM SÓC (/media/146742/download)
(May 5, 2022)

Tiếng Việt (Vietnamese)

EXHIBIT C



COVID-19

Safety of COVID-19 Vaccines

Updated May 23, 2022

What You Need to Know

- COVID-19 vaccines are **safe and effective**.
- Millions of people in the United States have received COVID-19 vaccines under the most intense safety monitoring in US history.
- CDC recommends you [get a COVID-19 vaccine](#) as soon as possible.

Hundreds of Millions of People Have Safely Received a COVID-19 Vaccine

More than 584 million doses of COVID-19 vaccine had been given in the United States from December 14, 2020, through May 23, 2022. To view the current total number of COVID-19 vaccinations that have been administered in the United States, please visit the [CDC COVID Data Tracker](#).

COVID-19 vaccines are **safe and effective**. COVID-19 vaccines were evaluated in tens of thousands of participants in clinical trials. The vaccines met the Food and Drug Administration's (FDA's) rigorous scientific standards for safety, effectiveness, and manufacturing quality needed to support emergency use authorization (EUA). [Learn more about EUAs in this video.](#) [↗](#)

The Pfizer-BioNTech, Moderna, and Johnson & Johnson/Janssen COVID-19 vaccines will continue to undergo the most intensive safety monitoring in US history. This monitoring includes using both [established and new safety monitoring systems](#) to make sure that COVID-19 vaccines are safe.

Common Side Effects

Some people have side effects after getting their COVID-19 vaccine, while others might have no side effects. Side effects may affect the ability to do daily activities, but they should go away within a few days. Learn more about [common side effects after COVID-19 vaccination](#).

Serious Safety Problems Are Rare

In rare cases, people have experienced serious health events after COVID-19 vaccination. Any health problem that happens after vaccination is considered an adverse event. An adverse event can be caused by the vaccine or can be caused by a coincidental event not related to the vaccine, such as an unrelated fever, that happened following vaccination.

To date, the systems in place to monitor the safety of these vaccines have found four [serious types of adverse events following COVID-19 vaccination](#), with evidence that suggests, although rare, a link to certain types of COVID-19 vaccinations

that were administered. They are:

Anaphylaxis

Anaphylaxis is a severe type of allergic reaction with symptoms such as hives, difficulty breathing, low blood pressure, or significant swelling of the tongue or lips. **Anaphylaxis after COVID-19 vaccination is rare.** [Learn more about COVID-19 vaccines and allergic reactions, including anaphylaxis.](#)

Thrombosis with Thrombocytopenia Syndrome (TTS)

Thrombosis with thrombocytopenia syndrome (TTS) is a rare but serious adverse event that causes blood clots or issues with clotting. **TTS after COVID-19 vaccination is rare.** [Learn more about COVID-19 vaccines and adverse events, including TTS.](#)

Myocarditis and Pericarditis

Myocarditis is inflammation of the heart muscle, and pericarditis is inflammation of the outer lining of the heart. **Myocarditis and pericarditis after COVID-19 vaccination are rare.** [Learn more about COVID-19 vaccines and adverse events, including myocarditis and pericarditis.](#)

Guillain-Barré Syndrome (GBS)

Guillain-Barré Syndrome (GBS) is a rare disorder where the body's immune system damages nerve cells, causing muscle weakness and sometimes paralysis. **GBS after COVID-19 vaccination is rare.** [Learn more about COVID-19 vaccines and adverse events, including GBS.](#)

Reports of Death Are Rare

Reports of death after COVID-19 vaccination are rare. FDA requires healthcare providers to report any death after COVID-19 vaccination to the [Vaccine Adverse Event Reporting System \(VAERS\)](#) [\[link\]](#), even if it's unclear whether the vaccine was the cause. **Reports of adverse events to VAERS following vaccination, including deaths, do not necessarily mean that a vaccine caused a health problem.** CDC and FDA review reports of death following COVID-19 vaccination and update information as it becomes available. [Learn more about adverse events, including reports of death, after COVID-19 vaccination.](#)

Benefits of Vaccination Outweigh the Risks

Serious side effects that could cause a long-term health problem are extremely unusual following any vaccination, including COVID-19 vaccination. The benefits of COVID-19 vaccination outweigh the known and potential risks.

CDC continues to closely monitor the safety of COVID-19 vaccines. Everyone who receives a COVID-19 vaccine can also participate in safety monitoring by [enrolling themselves, their children ages five years and older](#), or other dependents in a smartphone-based system called **v-safe** and completing health check-ins after COVID-19 vaccination.

Have you experienced a side effect following COVID-19 vaccination?

Please [report it to VAERS](#) [\[link\]](#). In addition, enrolling yourself or your dependent in **v-safe** allows you to easily report to CDC how you are feeling after getting a COVID-19 vaccine.

More Information

[ACIP COVID-19 Vaccines Safety Technical Sub-Group \(VaST\)](#)

[COVID-19 Vaccine Safety Publications](#)

[VaST Subgroup Technical Report](#)

v-safe After Vaccination Health Checker

Vaccine Adverse Event Reporting System (VAERS)

Last Updated May 23, 2022

Learn More About COVID-19 Vaccines from the FDA

Learn about the evidence supporting FDA-approval of Comirnaty and FDA emergency use authorization of COVID-19 vaccines

Everyone ages 12 and older can get a COVID-19 vaccine booster shot. Read more [booster information \(https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-frequently-asked-questions#biologics\)](https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-frequently-asked-questions#biologics) or [view eligibility \(/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/do-i-qualify-covid-19-vaccine-booster-and-which-one\)](https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/do-i-qualify-covid-19-vaccine-booster-and-which-one).

COVID-19 Vaccines: 4 Facts



[Español \(/consumers/articulos-en-espanol/aprenda-mas-sobre-las-vacunas-contr-el-covid-19-de-la-fda\)](/consumers/articulos-en-espanol/aprenda-mas-sobre-las-vacunas-contr-el-covid-19-de-la-fda)

[中文 \(/consumers/consumer-updates/congmeiguoshipinheyaowuguanlijulejieyouguan2019xinguanfeiyanyimiaodegengduoxinxi\)](/consumers/consumer-updates/congmeiguoshipinheyaowuguanlijulejieyouguan2019xinguanfeiyanyimiaodegengduoxinxi)

[한국의 \(/consumers/consumer-updates/misigpumuiyaggug-fdaeulobuteo-kobideu-19-covid-19-baegsine-daehayeo-deo-manhi-baeusibsio\)](/consumers/consumer-updates/misigpumuiyaggug-fdaeulobuteo-kobideu-19-covid-19-baegsine-daehayeo-deo-manhi-baeusibsio)

[Tagalog \(/consumers/consumer-updates/matuto-ng-higit-pa-tungkol-sa-bakuna-sa-covid-19-mula-sa-fda\)](/consumers/consumer-updates/matuto-ng-higit-pa-tungkol-sa-bakuna-sa-covid-19-mula-sa-fda)

[Tiếng Việt \(/consumers/consumer-updates/tim-hieu-them-ve-vac-xin-covid-19-tu-fda\)](/consumers/consumer-updates/tim-hieu-them-ve-vac-xin-covid-19-tu-fda)

The U.S. Food and Drug Administration approved [Comirnaty \(/vaccines-blood-biologics/comirnaty\)](/vaccines-blood-biologics/comirnaty) for the prevention of COVID-19 in individuals 16 years of age and older.

- Package insert - [purple cap \(/media/151707/download\)](/media/151707/download) or [gray cap \(/media/154834/download\)](/media/154834/download)
- [Frequently asked questions \(/vaccines-blood-biologics/qa-comirnaty-covid-19-vaccine-mrna\)](/vaccines-blood-biologics/qa-comirnaty-covid-19-vaccine-mrna)

The FDA approved [Spikevax \(/vaccines-blood-biologics/spikevax\)](/vaccines-blood-biologics/spikevax) for the prevention of COVID-19 in individuals 18 years of age and older.

- [Patient package insert \(/media/155762/download\)](/media/155762/download)
- [Frequently asked questions \(/vaccines-blood-biologics/qa-spikevax-covid-19-vaccine-mrna\)](/vaccines-blood-biologics/qa-spikevax-covid-19-vaccine-mrna)

Three COVID-19 vaccines are authorized for emergency use. The vaccines are:

[Pfizer BioNTech COVID-19 Vaccine \(/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/comirnaty-and-pfizer-biontech-covid-19-vaccine\)](/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/comirnaty-and-pfizer-biontech-covid-19-vaccine)

- [Fact sheet \(/media/144414/download\)](/media/144414/download) for recipients
- [Frequently asked questions \(/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/pfizer-biontech-covid-19-vaccine-frequently-asked-questions\)](/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/pfizer-biontech-covid-19-vaccine-frequently-asked-questions)

[Moderna COVID-19 Vaccine \(/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/spikevax-and-moderna-covid-19-vaccine\)](/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/spikevax-and-moderna-covid-19-vaccine)

- [Fact sheet \(/media/144638/download\)](/media/144638/download) for recipients
- [Frequently asked questions \(/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/moderna-covid-19-vaccine-frequently-asked-questions\)](/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/moderna-covid-19-vaccine-frequently-asked-questions)

[Janssen \(sometimes called Johnson & Johnson\) COVID-19 Vaccine \(/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine\)](/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine)

- [Fact sheet \(/media/146305/download\)](/media/146305/download) for recipients
- [Frequently asked questions \(/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine-frequently-asked-questions\)](/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/janssen-covid-19-vaccine-frequently-asked-questions)

Emergency use authorization (EUA) allows these vaccines to be distributed in the U.S. [Learn more \(/vaccines-blood-biologics/vaccines/emergency-use-authorization-vaccines-explained\)](/vaccines-blood-biologics/vaccines/emergency-use-authorization-vaccines-explained) about EUAs for COVID-19 vaccines from the FDA's Center for Biologics Evaluation and Research (CBER).

Who authorizes COVID-19 vaccines for emergency use?

The FDA is the regulatory authority with oversight of the safety, effectiveness and quality of vaccines that are used in the U.S., including COVID-19 vaccines. Career scientists and doctors at the FDA determine whether to approve or authorize COVID-19 vaccines after they thoroughly analyze and evaluate the data submitted by the manufacturer related to safety, effectiveness and manufacturing quality.

During a public health emergency like the current COVID-19 pandemic, the FDA may issue an EUA when the agency's scientific experts have determined, among other things, that the known and potential benefits of the vaccine outweigh its known and potential risks.

For Comirnaty, the company submitted a Biologics License application (BLA) to FDA which built on the extensive data and information previously submitted that supported the EUA. This included preclinical and clinical data and information, as well as details of the manufacturing process, vaccine testing results to ensure vaccine quality, and inspections at the sites at which the vaccine is made.

FDA employees are also fathers, mothers, daughters, sons, sisters, brothers and more. They and their families are directly impacted by the work they do.

Why should I get a COVID-19 vaccine?

When you get a COVID-19 vaccine, you are choosing to protect yourself and make a difference for your children, parents, grandparents, and other loved ones. Millions of people in the U.S. have already received a COVID-19 vaccine. For a community to be fully protected, most community members need to get the vaccine. Getting vaccinated to prevent COVID-19 will help protect you from COVID-19, and it may also protect the people around you.

How do I get a COVID-19 vaccine?

Search [vaccines.gov](https://www.vaccines.gov) (<https://www.vaccines.gov/search/>), text your ZIP code to 438829, or call 1-800-232-0233 to find COVID-19 vaccine locations near you in the U.S. In some states, information may be limited while vaccination providers and pharmacies are being added. Contact your [state health department](https://www.cdc.gov/publichealthgateway/healthdirectories/healthdepartments.html) (<https://www.cdc.gov/publichealthgateway/healthdirectories/healthdepartments.html>) to find additional vaccination locations in your area.

FDA-authorized or approved COVID-19 vaccines are distributed for free by states and local communities. You cannot buy COVID-19 vaccines online. You do not need to pay any out-of-pocket costs to get a COVID-19 vaccine — not before, during, or after your appointment. If someone asks you to pay for your vaccine, it is either a scam or a mistake.

Do COVID-19 vaccines work?

Yes. All FDA-approved and FDA-authorized COVID-19 vaccines prevent COVID-19 and serious health outcomes that COVID-19 can cause, including hospitalization and death. The FDA thoroughly evaluated and analyzed safety and effectiveness data for Comirnaty, the approved COVID-19 vaccine and those vaccines authorized for emergency use.

In evaluating requests for emergency use authorization for COVID-19 vaccines, the FDA determined that the available data provided clear evidence that the known and potential benefits outweigh the known and potential risks of each vaccine.

In evaluating the data and information included in the BLA for Comirnaty, the FDA determined that the vaccine is safe and effective and meets our rigorous standards for approval.

Do COVID-19 vaccines work against variants of the virus that causes COVID-19?

The available information suggests that the approved vaccine and the authorized vaccines protect the American public against COVID-19 caused by currently circulating strains of the virus that causes COVID-19.

Some variants are more contagious and spread more easily from person-to-person than the original virus that causes COVID-19. To help slow the spread of COVID-19, get a COVID-19 vaccine when it is available to you.

What safety information is available about COVID-19 vaccines?

The FDA evaluated data from clinical studies that included tens of thousands of people for Comirnaty, the FDA-approved COVID-19 vaccine, and for each of the COVID-19 vaccines authorized for emergency use.

Authorized COVID-19 Vaccines

The FDA has authorized three vaccines for emergency use because the data from clinical studies clearly showed that the known and potential benefits of the FDA-authorized COVID-19 vaccines outweighed the known and potential risks.

Approved COVID-19 Vaccine

The data to support the decision to approve Comirnaty builds on extensive data and information that supported the Pfizer-BioNTech COVID-19 Vaccine EUA, including information about the vaccine's safety and effectiveness. The safety of Comirnaty was evaluated in individuals 16 years of age and older, approximately 22,000 of whom received the vaccine and 22,000 of whom received placebo. More than half of the clinical trial participants were followed for safety follow-up for at least four months after the second dose. After issuance of the EUA, clinical trial participants were unblinded in a phased manner over a period of months to offer placebo recipients the Pfizer-BioNTech COVID-19 Vaccine. Overall, in blinded and unblinded follow-up, approximately 12,000 vaccine recipients have been followed for at least 6 months.

Allergic Reactions

Allergic reactions, including cases of anaphylaxis have happened after some people received a COVID-19 vaccine. Anaphylaxis is a severe, life-threatening allergic reaction that happens within seconds or minutes of exposure to an allergen. Because of this remote chance of severe allergic reaction or anaphylaxis, health care providers may ask you to stay at the place where you received your COVID-19 vaccine for monitoring for 15 to 30 minutes.

Myocarditis and Pericarditis Following Vaccination with Comirnaty, Moderna and Pfizer-BioNTech COVID-19 Vaccines

Post-authorization safety surveillance data pertaining to myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the tissue surrounding the heart) demonstrate increased risks of myocarditis and pericarditis, particularly within 7 days following the second dose of the Comirnaty, Moderna, and Pfizer-BioNTech COVID-19 vaccines. For each of these vaccines, the risk is higher in males under 40 years of age than in females or older males.

The Prescribing Information for Comirnaty and the Fact Sheets for Healthcare Providers Administering Vaccine (Vaccination Providers) for the Moderna and Pfizer-BioNTech COVID-19 vaccines include a warning about the risk of myocarditis and pericarditis, and the Fact Sheet for Recipients and Caregivers includes information about myocarditis and pericarditis. The Fact Sheets for Recipients and Caregivers note that vaccine recipients should seek medical attention right away if they experience any of the following symptoms after vaccination:

- Chest pain
- Shortness of breath
- Feelings of having a fast-beating, fluttering, or pounding heart

Based on available information of the confirmed reported cases of myocarditis or pericarditis, most affected individuals were hospitalized and most responded well to treatment and rest, and their symptoms went away quickly.

FDA and CDC are monitoring the reports, collecting more information, and will follow-up to assess longer-term outcomes over several months.

Guillain Barré Syndrome Following Vaccination with Janssen COVID-19 Vaccine

Guillain Barré syndrome (a neurological disorder in which the body's immune system damages nerve cells, causing muscle weakness and sometimes paralysis) has occurred in some people who have received the Janssen COVID-19 Vaccine. In most of these people, symptoms began within 42 days following receipt of the Janssen COVID-19 Vaccine. The chance of having this occur is very low. The Fact Sheet for Healthcare Providers Administering Vaccine (Vaccination Providers) includes a warning about the suggested increased risk of Guillain Barré Syndrome (GBS) and the Fact Sheet for Recipients and Caregivers includes information about GBS. The Fact Sheet for Recipients and Caregivers notes that vaccine recipients should seek medical attention right away if they experience any of the following symptoms after receiving the Janssen COVID-19 Vaccine:

- Weakness or tingling sensations, especially in the legs or arms, that's worsening and spreading to other parts of the body
- Difficulty walking
- Difficulty with facial movements, including speaking, chewing, or swallowing
- Double vision or inability to move eyes
- Difficulty with bladder control or bowel function

Blood Clots in Combination with Low Blood Platelets Following Vaccination with Janssen COVID-19 Vaccine

As a result of ongoing safety monitoring, on April 13, 2021, the FDA and CDC recommended a temporary pause in the use of Janssen COVID-19 Vaccine, due to reports of a serious and rare type of blood clot in combination with low blood platelets (blood cells that help your body stop bleeding). This serious condition is called thrombosis with thrombocytopenia syndrome (TTS).

On April 23, 2021, the FDA and CDC [lifted the recommended pause \(/news-events/press-announcements/fda-and-cdc-lift-recommended-pause-johnson-johnson-janssen-covid-19-vaccine-use-following-thorough\)](#) on the Janssen COVID-19 Vaccine after this thorough safety review. The [Fact Sheet for Healthcare Providers Administering Vaccine \(https://www.fda.gov/media/146304/download\)](#) (Vaccination Providers) to include a warning about the risk of blood clots with low blood platelets. The warning notes that people who developed blood clots with low blood platelets after receiving the Janssen COVID-19 Vaccine, symptoms began about 1 to 2 weeks after vaccination. Reporting of these blood clots with low levels of platelets has been highest in females ages 18 through 49 years. The [Fact Sheet for Recipients and Caregivers \(https://www.fda.gov/media/146305/download\)](#) also includes information about blood clots with low blood platelets after receiving the Janssen COVID-19 Vaccine and notes that vaccine recipients should seek medical attention right away if they experience any of the following symptoms after receiving the Janssen COVID-19 Vaccine:

- Shortness of breath

- Chest pain
- Leg swelling
- Persistent abdominal pain
- Severe or persistent headaches or blurred vision
- Easy bruising or tiny blood spots under the skin beyond the site of the injection

These may not be all the possible side effects of Janssen COVID-19 Vaccine. Serious and unexpected side effects may occur.


Can I see the safety and effectiveness data that support the the approval of Comirnaty and the emergency use authorization of the COVID-19 vaccines?

The FDA is publicly sharing information about COVID-19 vaccines so you can see the evidence for yourself. The FDA’s analysis of clinical trial data, including but not limited to demographic information about the clinical study volunteers, is available in the Summary Basis for Regulatory Action for Comirnaty and the decision memos that explain FDA’s basis for authorizing each vaccine for emergency use. In addition, for the authorized vaccines, an FDA Briefing Document for the Vaccines and Related Biological Products Advisory Committee is available, as noted below.

COVID-19 Vaccine	FDA Briefing Document	Advisory Committee Meeting Webcast	FDA Decision Memorandum
Comirnaty	Not applicable	Not applicable	Comirnaty (https://www.fda.gov/media/151733/download) (August 23,2021)
Pfizer-BioNTech COVID-19 Vaccine	Pfizer-BioNTech (/media/144245/download)	December 10, 2020 Webcast (/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-december-10-2020-meeting-announcement)	Pfizer-BioNTech (/media/144416/download) (December 11, 2021) Pfizer-BioNTech (/media/148542/download) (May 10, 2021)
Moderna COVID-19 Vaccine	Moderna (/media/144434/download)	December 17, 2020 Webcast (/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-december-17-2020-meeting-announcement)	Moderna (/media/144673/download)
Janssen (sometimes called Johnson & Johnson) COVID-19 Vaccine	Janssen (/media/146217/download)	February 26, 2021 Webcast (/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-february-26-2021-meeting-announcement)	Janssen (/media/146338/download)

Does the FDA monitor COVID-19 vaccine safety after authorization

and approval?

Yes. The FDA and the CDC have several systems in place to continually monitor COVID-19 vaccine safety. These systems, called “passive surveillance” and “active surveillance” systems, rapidly detect and investigate potential safety problems. Systems such as the Vaccine Adverse Event Reporting System (<https://vaers.hhs.gov/>) (VAERS) and CDC’s text-based v-safe (<https://vsafe.cdc.gov/>) system, which receive reports of adverse events following vaccination, are examples of passive surveillance systems. The FDA’s BEST Initiative (<https://www.bestinitiative.org/>)  (<http://www.fda.gov/about-fda/website-policies/website-disclaimer>) is an example of an active surveillance system, which analyzes information occurring in millions of individuals recorded in large data systems to investigate any safety signals that are identified by VAERS or v-safe.

Related Information

- FDA: COVID-19 Vaccine Safety Monitoring (</vaccines-blood-biologics/safety-availability-biologics/covid-19-vaccine-safety-surveillance>)
- FDA COVID-19 Vaccine Information: <http://www.fda.gov/covid19vaccines> (</emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines>)

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ALL****[COVID19.CA.GOV](https://covid19.ca.gov)****Your actions save lives**

Vaccines

Last updated May 18, 2022 at 4:20 PM

Second booster shot now available for some people

The CDC now recommends a second booster shot for people over 50, those who are immune-compromised, and those who got the Johnson & Johnson vaccine.

[See if you're eligible](#) .

Get vaccinated – it's safe and effective.

Vaccination is the most important tool to end the COVID-19 pandemic.

On this page:

- > [How to get vaccinated](#)
- > [Who can get vaccinated](#)

- › [How COVID-19 vaccines work](#)
- › [Vaccines and variants](#)
- › [Booster shots and additional doses](#)
- › [Digital vaccine record](#)
- › [Side effects](#)
- › [Questions and answers](#)

How to get vaccinated:

My Turn

Check myturn.ca.gov or call [1-833-422-4255](tel:1-833-422-4255)
to book an appointment or find a walk-in site
near you.

Go to My Turn

Vaccines.gov

Use the CDC's [Vaccines.gov](https://vaccines.gov) to book an
appointment or find a walk-in site near you.

Go to Vaccines.gov

You can also check with your healthcare provider or local pharmacy.

Who can get vaccinated

Any Californian aged 5 and up can get vaccinated.

If you have health insurance, vaccination is free. If you're uninsured, ask your vaccination site if they provide free shots.

Your immigration status does not matter. No one will ask about your immigration status when you get vaccinated.

Vaccinations for kids

Pfizer's COVID-19 vaccine is [authorized for kids aged 12 and up](#)[↗]. A lower dose of the Pfizer vaccine is now [authorized for kids aged 5 to 11](#)[↗].

Both are safe and effective in protecting children from COVID-19.

How COVID-19 vaccines work



Vaccines are highly effective against severe COVID-19.

COVID-19 vaccines teach our immune systems how to fight the virus that causes COVID-19. It is still possible to get COVID-19 after vaccination. But your symptoms will likely be much less severe, helping you avoid hospitalization and death.

What we know

- Vaccinations can prevent nearly all COVID-19-related hospitalizations and deaths. [Post-vaccination cases](#) are much less severe.
- Vaccinations reduce the spread of COVID-19.
- COVID-19 vaccines are effective against many [variants](#) of the virus.
- People with weakened immune systems may not be protected even if vaccinated.

What we're still learning

- How long COVID-19 vaccine protection lasts

Once you're vaccinated

When you've been vaccinated, you can return to activities you did before the pandemic. But stay aware of public health recommendations that still apply to you.

Read more from CDPH:

- [Get the Facts on Vaccines](#) 
- [Which Vaccine is Right for You](#) 

Vaccines and variants

Vaccination has proven very effective against COVID-19 variants. The best thing we can do to limit virus spread and mutation is to:

- Get vaccinated
- Get your booster if you're eligible

See [variants now present in California](#).

More info about COVID-19 variants from CDPH:

- [Tracking Variants](#) 
- [Fact Sheet: Omicron Variant](#) 

Booster shots and additional doses

Booster shots

Booster shots are now available for everyone 12 and older.

Get a booster shot as soon as you're eligible:

- If you got a **Moderna** or **Pfizer** vaccine, get a booster shot after 5 months
- If you got a **Johnson & Johnson** vaccine, get a booster shot after 2 months

Your booster shot can be a different vaccine brand than you got in your original series. A Pfizer or Moderna booster is strongly advised for those who got the Johnson & Johnson vaccine. Those aged 12-17 can only get a Pfizer booster.

To book your booster shot or find a walk-in clinic, visit [My Turn](#).

See why the CDC urges you to [stay up to date with your vaccines](#).

Read [more booster facts](#) and [booster questions and answers](#) from CDPH.

Second booster shots

The CDC now recommends a second booster shot for:

- People over 50
- Those who are immune-compromised
- Those who got the Johnson & Johnson vaccine

You must have gotten your first booster dose at least 4 months ago. [See](#)

[if you're eligible](#) .


Additional doses

Additional doses of Pfizer or Moderna are available for those with compromised immunity.

This includes people who:

- Get **active cancer treatment** for tumors or cancers of the blood
- Got an **organ transplant** and are taking medicine to suppress the immune system
- Got a **stem cell transplant** within the last 2 years or are taking medicine to suppress the immune system
- Have **moderate or severe primary immunodeficiency** (such as DiGeorge syndrome, Wiskott-Aldrich syndrome)
- Have **advanced or untreated HIV infection**
- Get **active treatment with high-dose corticosteroids** or other drugs that suppress immune response

Children aged 5-11 with these conditions can get an additional dose of Pfizer.

Talk to your doctor to see if getting an additional dose is right for you. If you meet these criteria, you can book your shot at [My Turn](#) .


See [questions and answers about additional doses](#) .

Digital vaccine record

You can now get a digital copy of your vaccination record. This is called the [Digital COVID-19 Vaccine Record](#)  (DCVR). It's available to you if:

- You got vaccinated in California, and
- Your information matches what is recorded in the state's immunization systems.

To get your vaccine record:

- Go to myvaccinerecord.cdph.ca.gov 
- Enter your:
 - Name
 - Date of birth
 - Email or phone number you gave when vaccinated
 - Create a four-digit PIN

This digital copy can be used as proof of vaccination.


See [Frequently Asked Questions](#)  to learn more about your digital vaccine record.

If you have trouble getting your record

If you couldn't get your vaccine record, you may need to correct or add some information.

What might prevent you from getting your COVID-19 vaccination record:

- Your vaccination site does not report to the state's immunization systems
- Your vaccination site didn't report your vaccination
- The information you entered doesn't match your record in the registry

To correct or update your vaccine record, start an online chat with My Turn's [Virtual Assistant](#) .

Read CDPH's [Vaccine Record Guidelines & Standards](#) for more information.

Side effects

After COVID-19 vaccination, you may have some mild side effects. These are normal signs that your body is building immunity. More serious side effects rarely happen.

Mild side effects

Common mild side effects include:

- Soreness, redness, or swelling where you got the shot
- Feeling tired, headache, muscle pain, chills, fever, or nausea

Side effects may affect your ability to do daily activities, but should go away in a few days. Some people have no side effects.

Rare but serious side effects

Blood clots

Rarely, women under 50 who get the Johnson & Johnson vaccine have a risk of blood clots with low platelets. This risk is not seen in other COVID-19 vaccines. Read CDPH's [Fact Sheet: Johnson & Johnson COVID-19 Vaccine Benefits and Risks](#) [PDF](#).

Myocarditis and pericarditis

Some young people have developed inflammation of heart muscle or

membrane after getting Pfizer or Moderna. Despite this, the CDC says the benefits of COVID-19 vaccination outweigh the risks.

People aged 12-39 may consider waiting 8 weeks between doses of Moderna or Pfizer. More time between doses may reduce the risk of myocarditis in males aged 12-39.

Read more in these CDPH fact sheets:

- [Pfizer COVID-19 Vaccine Benefits and Risks](#) [PDF](#)
- [Moderna COVID-19 Vaccine Benefits and Risks](#) [PDF](#)
- [COVID-19 Vaccine Timing: 2nd Dose](#) [PDF](#)

Reporting side effects of vaccines

If you have experienced a side effect after COVID-19 vaccination, you can report it to:

- [VAERS](#) [↗](#) (Vaccine Adverse Event Reporting System)
- [V-safe](#) [↗](#) (After Vaccination Health Checker)

When to call the doctor

In most cases, discomfort from pain or fever is a normal sign that your body is building protection. Contact your doctor or healthcare provider if:

- The redness or tenderness where you got the shot gets worse after 24 hours
- Your side effects are worrying you or do not seem to be going away after a few days

If you get a COVID-19 vaccine and you have a severe reaction, seek immediate medical care by calling 911. Learn more about [COVID-19 vaccines and rare severe allergic reactions](#) [↗](#).

Read more in the CDC's [Possible Side Effects After Getting a COVID-19 Vaccine](#) [↗](#).

Questions and answers

Getting vaccinated

How many COVID-19 vaccine doses do I need, and



Can I mix and match COVID-19 vaccines from



What if I was vaccinated outside the United States?



How much will the COVID-19 vaccine cost?



Do I need to be a California resident to get a



How do I cancel or reschedule my vaccine



I've already had COVID-19. Should I get a COVID-19



Can I get vaccinated against COVID-19 while I am



Will COVID-19 vaccine sites be accessible?



How do I get a COVID-19 vaccine at home if I am



How do I get transportation to a vaccine site?



What to expect after vaccination

Will I need a booster vaccination?



What is acceptable as proof of vaccination?



What does it mean to be “vaccinated and boosted”?



Will the COVID-19 vaccine make me test positive for



How is my privacy protected if I take the COVID-19



Should I keep my COVID-19 vaccination record



If I get a booster shot or additional dose, will it show



Vaccination for children

Do providers need parental consent before



Why should I vaccinate my child?



My child has had reactions to other vaccines. Should



Can children who have pre-existing conditions like



Will my child have to get vaccinated to attend in-



Why did it take longer for the COVID-19 vaccine to



Vaccinations for employees

I'm an employer and want to help my employees get



Can an employer require COVID-19 vaccination for



Are people with certain jobs required to be



Vaccine limitations

If I get a COVID-19 vaccine, will I still need a flu



Are there certain populations who should not get a



COVID-19 vaccine? What about people with

If I'm pregnant or breastfeeding, should I get the



How long should I wait to get the vaccine after I've



Can I get a COVID-19 vaccine at the same time as



Vaccine choices

Will I have a choice between the various COVID-19



Are the COVID-19 vaccines FDA-approved?



Are the COVID-19 vaccines mandatory?



Do I need to be vaccinated to visit a healthcare



How can I convince my family and friends to take a



Did you find what you were looking for?

Stay informed

Yes

No

- CDPH: [COVID-19 Vaccine Action Plan](#)
- CDPH: [COVID-19 \(Coronavirus Disease 2019\) Vaccines](#)
- CDPH: [California COVID-19 Vaccination Program](#)
- CDC: [COVID-19 Vaccines](#)
- CDC: [Key Things to Know About COVID-19 Vaccines](#)
- CDC: [COVID-19 Vaccination](#)

FOR ALL

Hotlines and local info

Social media sharing

Safe Schools For All

Vaccinate All 58

Safer At Work

CA Notify

My Turn

COVID-19 hotline

1-833-422-4255

M-F 8AM-8PM, Sa-Su 8AM-5PM

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Part of [San Francisco COVID-19 Vaccine Tracker](#)

Core Guidance for COVID-19

COVID-19 facts and how you can to protect yourself and your community.

Get a flu vaccine during the COVID-19 pandemic.

We need to stop the spread of flu so that our healthcare workers have time to care for COVID-19 patients. Check with your provider to schedule a flu vaccine, or [get a free or low-cost flu vaccine from the City](#). Frequent hand washing, wearing face masks, and social distancing also help to prevent both the flu and COVID-19.

How can I protect myself against COVID-19?

Be up-to-date on vaccination.

This means, [get vaccinated](#) as soon as you can, and [get boosted](#) as soon as you are

eligible! Vaccination remains the most effective way to protect yourself and others. Boosters are strongly recommended for everyone 12 years old or older.

Wear a well-fitting mask.

An N95 is best and a surgical mask is good, but a cloth mask that fits well and has at least three layers is better than no mask. Cover your mouth and nose with a mask when indoors and close to people who don't live in your household. If you are not up-to-date on vaccinations, it is especially important for you to wear a mask.

Stay aware.

Masking is even more important for everyone when lots of people in our community are getting COVID-19, and it is often required by [state](#) and [local](#) public health orders to stop the spread. Stay up-to-date on [how much COVID-19 there is in our community](#) and when and where the most current health orders say you should mask.

Be outside whenever you can.

Outdoors is much safer than indoors. Avoid crowded, poorly ventilated indoor activities, especially if you are not up-to-date on vaccination, are at risk of severe illness from COVID-19, or if you live with or could expose someone who is at risk of severe illness from COVID-19.

Keep an eye on your health.

Pay attention to fevers, cough, shortness of breath, or other symptoms. If you are experiencing any of these symptoms, [follow guidance for staying home](#), seek medical care when necessary, and [get tested](#).

Wash your hands often with soap and water.

If soap and water are not available, use a hand sanitizer that contains at least 60% alcohol.

What should I know about the COVID-19 vaccine?

The vaccine really helps prevent serious illness and death.

Vaccines for COVID-19 work. They are safe and free. The vaccine is one of the most important ways to end the pandemic because it is excellent at protecting you from getting very sick or dying.

The vaccine really helps hospitals.

Being up-to-date on your vaccines can help keep our hospitals working well, and not overloaded, so that hospitals can care for people with other emergencies, like heart attacks.

The vaccine is safe.

The FDA, CDC, and California's own Scientific Safety Review Workgroup have reviewed data from clinical trials to ensure the safety and effectiveness of COVID-19 vaccines.

We recommend it!

SFDPH strongly encourages everyone who is eligible to get vaccinated, and to get a booster as soon as soon as is recommended. Find out more about vaccines and boosters, including where and when to get them at: sf.gov/covidvax.

When do I need to get tested?

If you have been exposed to COVID-19 or have COVID-19 [symptoms](#), follow [SFDPH guidelines for quarantine](#). Find out about your [COVID-19 testing options](#) and get tested. Ask for medical care if you need it.

What happens if I test positive?

Follow [SFPDH guidelines for isolation](#). Keep an eye on your symptoms and ask for medical care if you need it. There are [resources to help with isolation or quarantine](#), if you need them.

What changes when I am up-to-date on vaccination?

Your risk of going to the hospital or dying is MUCH less.

[People who are up-to-date on vaccination](#) (this means they have gotten all of their recommended COVID-19 vaccines—including boosters—when they were eligible) have a much lower risk of hospitalization and death from COVID-19.

You still need to follow guidance to protect others.

People who are up-to-date on vaccination still need to follow [state](#) and [local](#) health orders and any guidance from workplaces and local businesses.

You can still get infected.

People who are up-to-date on vaccination can still get infected with COVID-19. If you are up-to-date on vaccination and have COVID-19 [symptoms](#) or were a close contact to someone with COVID-19, follow guidance for [isolation, quarantine, and testing](#).

Should I check temperatures and COVID symptoms at the door?

No.

SFDPH does not require this because it has not been very helpful in preventing the spread of COVID-19.

Everyone should monitor themselves for [COVID-19 symptoms](#) or exposures.

Employers should ask employees to check for symptoms before coming to work. If they have symptoms, they should [isolate](#), get tested, and get medical care if they need it.

Some high-risk settings may still be required to screen.

Organizations may also choose to continue screening. If you screen, do it safely and with respect, and make sure you are following privacy laws. For additional resources see sfcdcp.org/screen.

How can I improve ventilation?

Good ventilation = less spread!

You can open windows and doors to bring in fresh air from outside, but only when health and safety allow. Do not prop open fire doors and make sure that open windows do not pose a fall risk for children.

Set HVAC to take in outdoor air.

Try not to recirculate indoor air. An HVAC professional can check your system to make sure that it is working properly and to see if it can use better filters. If you can, keep your ventilation going even when the building is not being used.

HEPA helps

You may also use portable air cleaners (“HEPA filters”), especially where the ventilation is not good. Fans can also help, but make sure that the fan is not blowing the air from one person to another.

For more information about ventilation, see [California Department of Public Health's Ventilation guidance](#).

Last updated May 19, 2022

Related

[Working during COVID-19](#)

Resources for working safely and getting support.

Departments or Public Bodies

[Department of Public Health](#)
[Disease Prevention and Control](#)

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EXHIBIT D



COVID-19

COVID-19 Vaccines Work

Updated Dec. 23, 2021

All currently approved or authorized COVID-19 vaccines are [safe](#) and [effective](#) and [reduce your risk](#) of severe illness. Vaccination can reduce the spread of disease, which helps protect those who get vaccinated and the people around them.

CDC Recommends

- Everyone ages 5 years and older should get a COVID-19 vaccine as soon as they can.
- To get the most protection, get all recommended doses of a COVID-19 vaccine. Take [all precautions](#) until you are [up to date with your COVID-19 vaccinations](#).
- Everyone ages 16 years and older can get a [booster shot](#) either 6 months after their initial Pfizer or Moderna series, or 2 months after their initial Johnson & Johnson's Janssen vaccine.

COVID-19 Vaccines Protect Against COVID-19 Infections and Hospitalizations

Vaccines reduce the risk of COVID-19, including the risk of severe illness and death among people who are fully vaccinated. In addition to data from clinical trials, evidence from real-world vaccine effectiveness studies show that COVID-19 vaccines help protect against COVID-19 infections, with or without symptoms (asymptomatic infections). Vaccine effectiveness against hospitalizations has remained relatively high over time, although it tends to be slightly lower for [older adults](#) and for people with weakened immune systems.

Most People Need Booster Shots

While COVID-19 vaccines are effective, studies have shown some declines in vaccine effectiveness against infections over time, especially when the Delta variant was circulating widely. Everyone ages 18 and older should get a [booster shot](#) either 6 months after their initial Pfizer or Moderna series, or 2 months after their initial Johnson & Johnson's Janssen vaccine. People ages 16–17 may get a booster dose of Pfizer at least 6 months after their initial series of vaccines.

Vaccine Breakthrough Infections

COVID-19 vaccines are effective at preventing infection, serious illness, and death. Most people who get COVID-19 are unvaccinated. However, since vaccines are not 100% effective at preventing infection, some people who are [fully vaccinated](#) will still get COVID-19. This is called a [breakthrough infection](#). Even when people who are fully vaccinated develop symptoms of COVID-19, they tend to be less severe than in people who are unvaccinated.

COVID-19 Vaccines Are Effective Against Most Variants

Viruses are constantly changing and new types of the virus, called [variants](#), occur. New variants of the virus that causes COVID-19 are spreading in the United States and in other parts of the world. COVID-19 vaccines are effective against the Delta variant and other variants with widespread circulation in the United States. **Current vaccines are expected to protect against severe illness, hospitalizations, and deaths due to infection with the [Omicron variant](#).** We don't yet know how effective the

vaccines will be against new variants that might arise. CDC will continue to monitor vaccine effectiveness to see if variants have any impact on how well COVID-19 vaccines work in real-world conditions.

For More Information

The latest CDC data on COVID-19 vaccine effectiveness are summarized on the [CDC COVID Data Tracker](#).

Information on [CDC's Monitoring COVID-19 Vaccine Effectiveness](#)

Last Updated Dec. 23, 2021

EXHIBIT E

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Your actions save lives

Tracking COVID-19 in California

Last updated May 27, 2022 at 10:00 AM

California is tracking data to understand the spread of COVID-19.

On this page you'll find:

- › [Latest update](#)
- › [Unvaccinated and vaccinated data](#)
- › [County and statewide data](#)
- › [Cases and deaths by ethnicity, gender, and age](#)
- › [Explore more data](#)

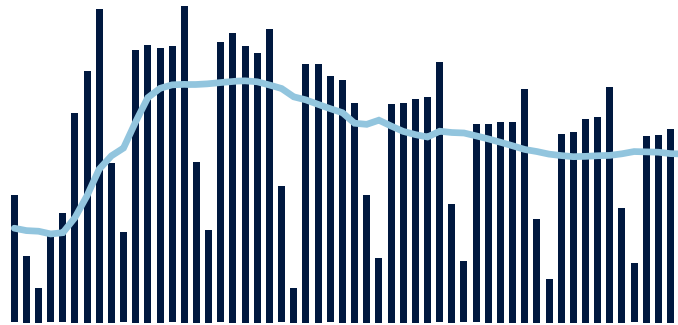
Update for May 27, 2022

VACCINES ADMINISTERED

76,146,348 total

53,127 daily avg.

84.1% of population vaccinated
(5+ with at least one dose)



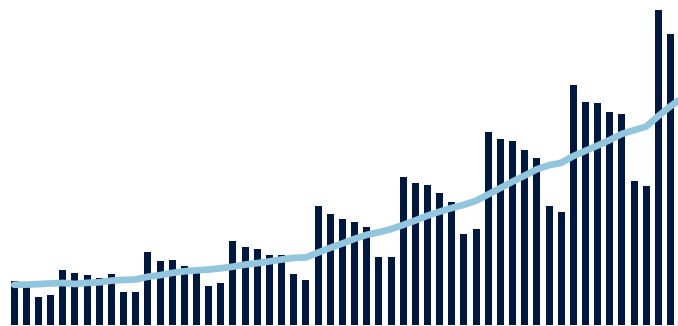
March 25 – May 19

CASES

8,896,174 total

12,362 daily avg.

30.8 new cases (per 100K)



March 24 – May 18

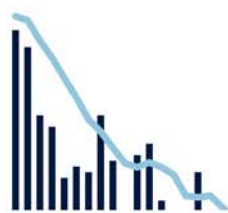
DEATHS

90,612 total

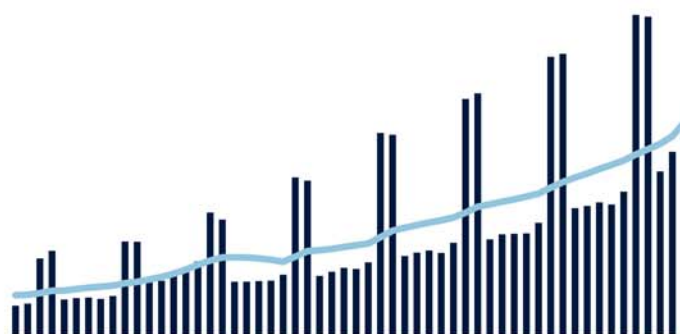
9 daily avg.

0.02 new deaths (per 100K)





March 10 – May 4

TESTS**7.0%** test positivity

March 31 – May 25

Updated May 27, 2022 at 9:38 AM, with data from May 26, 2022. Data is updated on Tuesdays and Fridays.

[Vaccines administered source data](#) and [cases, deaths, and tests source data](#)

**Data notes**

Unvaccinated and vaccinated data

Vaccines prevent serious illness, save lives, and reduce further spread of

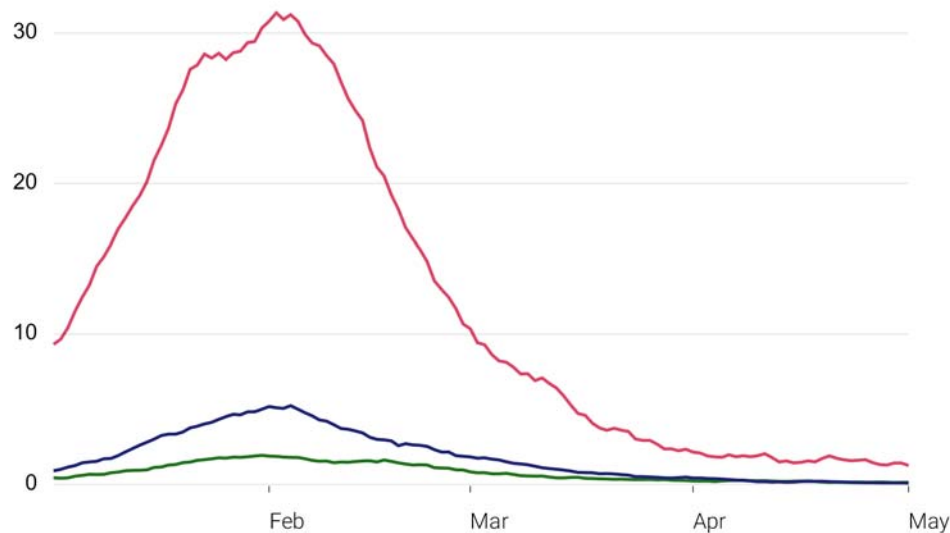
COVID-19. As more people are vaccinated, the virus is less likely to spread, mutate, and potentially become even more dangerous. Vaccines will help put an end to the pandemic.



From April 25, 2022 to May 1, 2022, unvaccinated people were **10.1 times more likely** to die from COVID-19 than people who received their booster dose.

Deaths per million (7-day running average)

— Unvaccinated
— Vaccinated but not boosted
— Vaccinated and boosted



[Unvaccinated and vaccinated cases, hospitalizations, and death source data](#)

[Data is updated on Fridays.](#)



Chart information

Vaccines administered data

We're tracking the progress of vaccinating Californians across the state.

VIEW VACCINATION DATA



County and statewide data

Get county data

Cases and deaths

California has 8,896,174 confirmed cases of COVID-19, resulting in 90,612 deaths.

Confirmed cases in California

Episode date

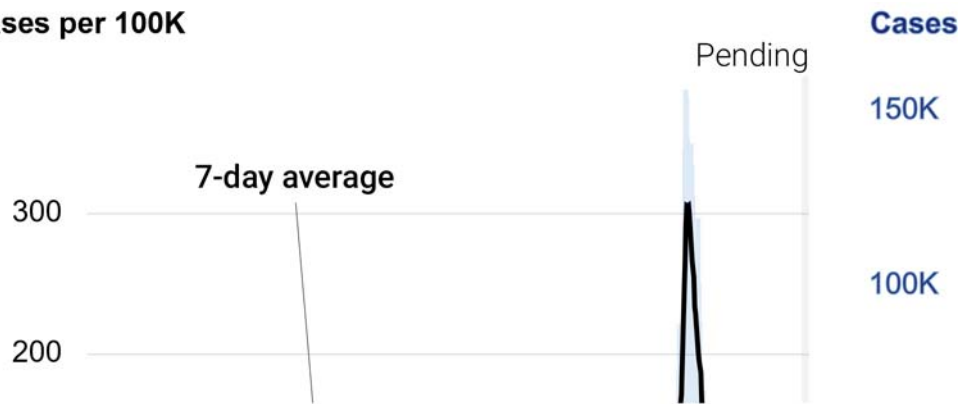
All time

8,896,174 total confirmed cases

42,676 new cases (0.5% increase)

30.8 cases per 100K (7-day average)

Cases per 100K



Confirmed deaths in California

[Death date](#)

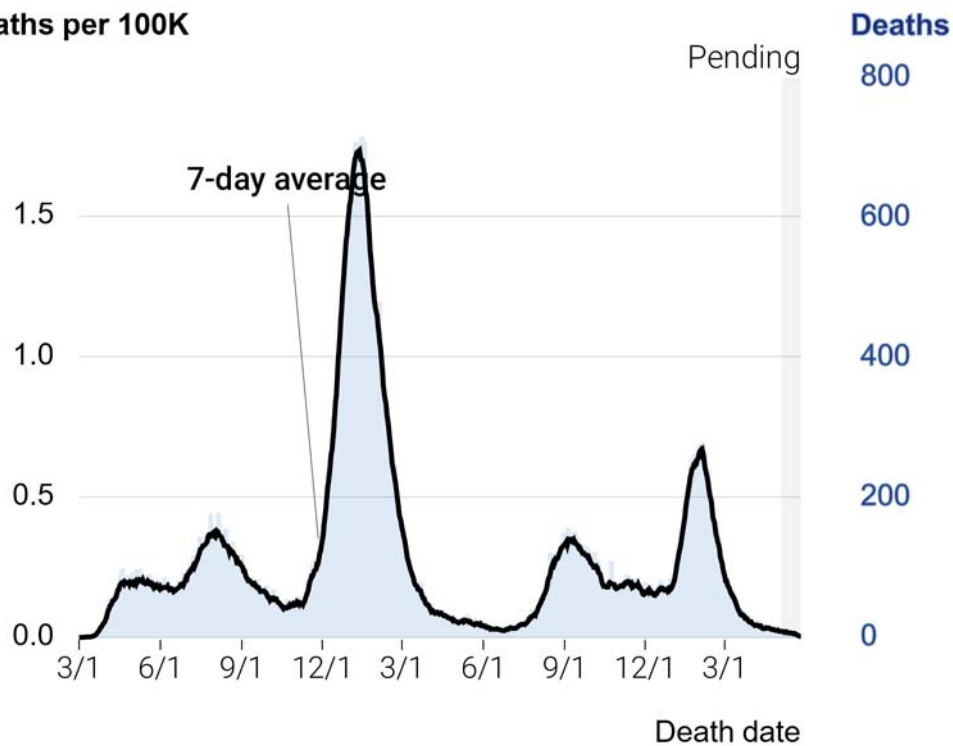
[All time](#)

90,612 total confirmed deaths

124 new deaths (0.1% increase)

0.02 deaths per 100K (7-day average)

Deaths per 100K



[Confirmed cases and deaths source data](#). Data is updated on Tuesdays and Fridays.



Chart information

Testing for COVID-19

The number of COVID-19 diagnostic test results in California reached a total of 168,381,590, an increase of 1,006,527 tests from the prior day total. The rate of positive tests over the last 7 days is 7.0%.

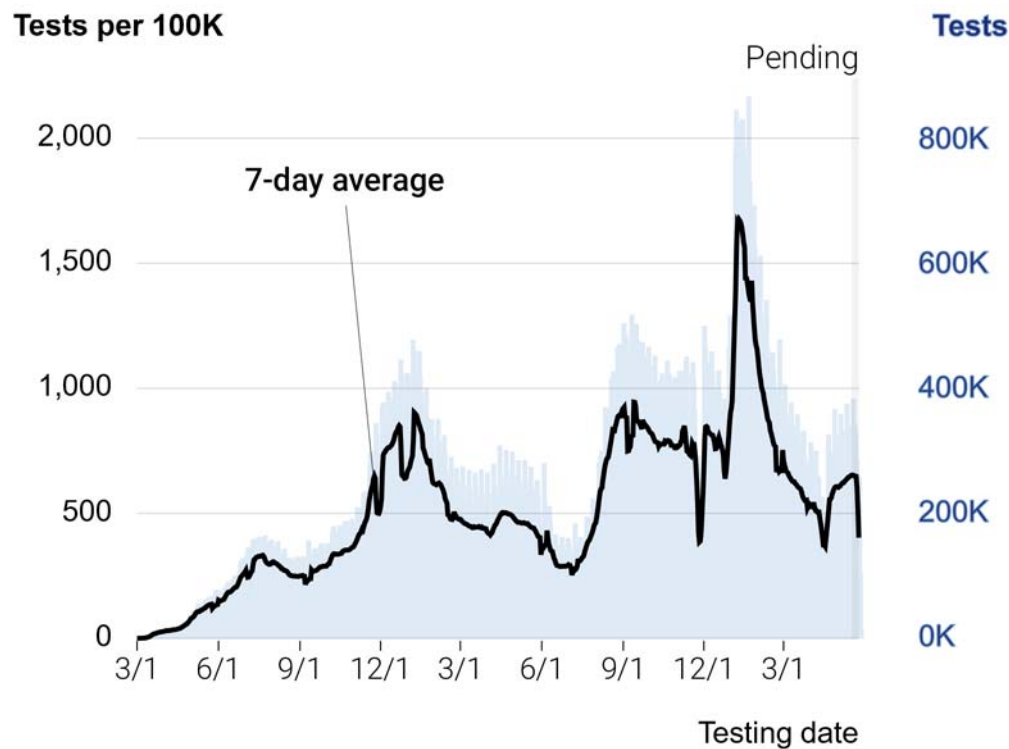
Total tests in California

[Testing date](#)

[All time](#)

168,381,590 total tests performed

1,006,527 new tests reported (**0.6%** increase)

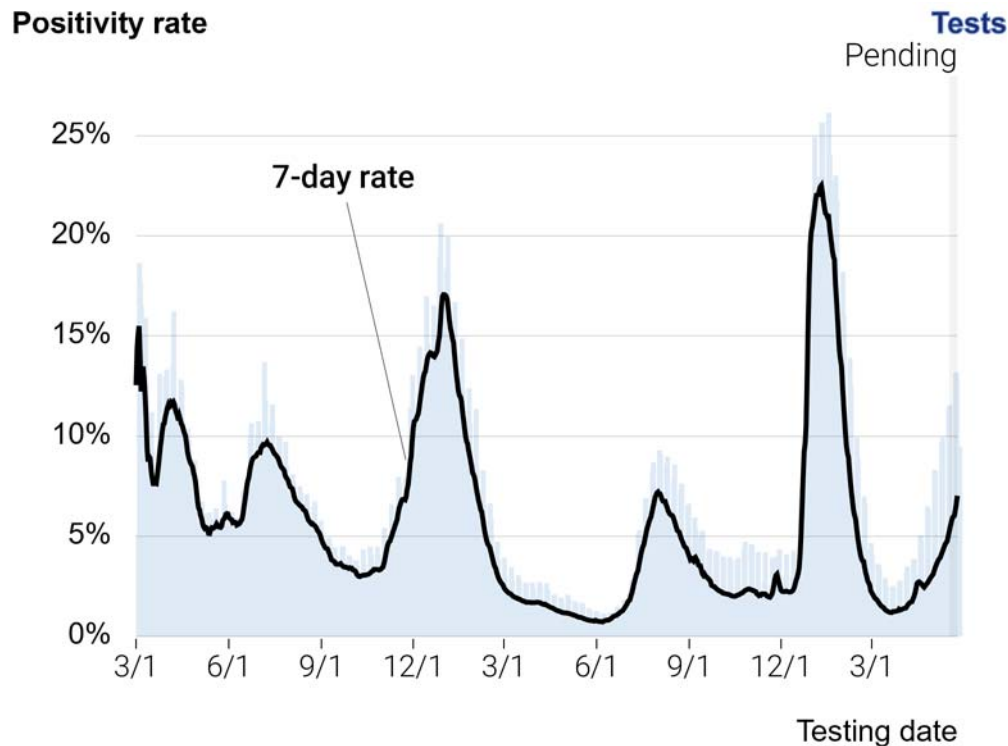


Positivity rate in California

[All time](#)

7.0% test positivity (7-day rate)

1.5% increase from 7-days prior



[Total tests and positivity rate source data](#). Data is updated on Tuesdays and Fridays.



Chart information

Hospitalizations

The number of hospitalizations due to confirmed COVID-19 cases in California reached a total of 2,056, an increase of 89 from the prior day total. The number of ICU patients due to confirmed COVID-19 cases in California reached a total of 244, an increase of 6 from the prior day total.

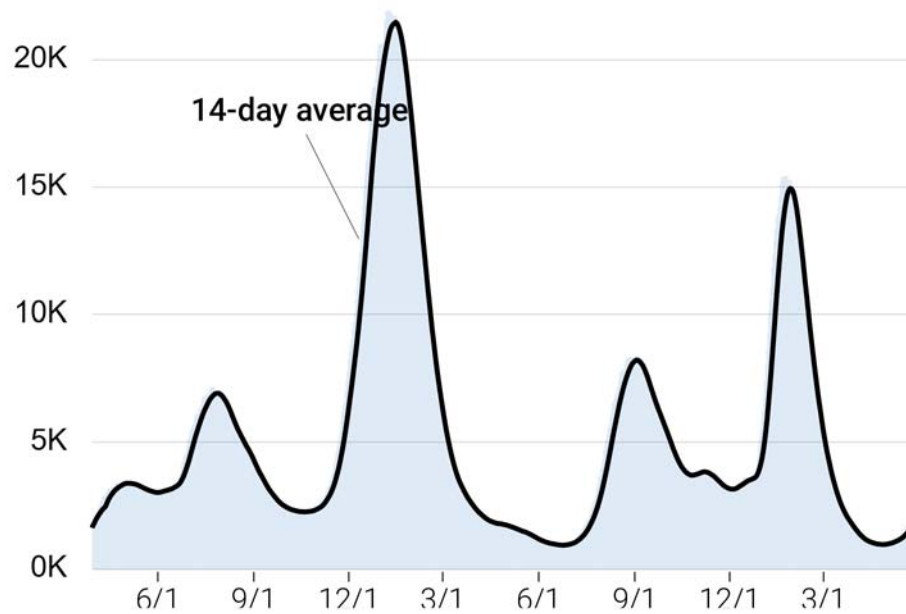
COVID-19 hospitalized patients in California

[Hospitalized](#)

[All time](#)

2,056 COVID-19 hospitalized patients

89 more patients hospitalized from prior day total (4.5% increase)



ICU beds in California

[All time](#)

2,111 ICU beds available

58 more ICU beds available from prior day total (2.8% increase)



Reported date

[COVID-19 hospitalized patients and ICU source data](#). Data is updated on


Tuesdays and Fridays.



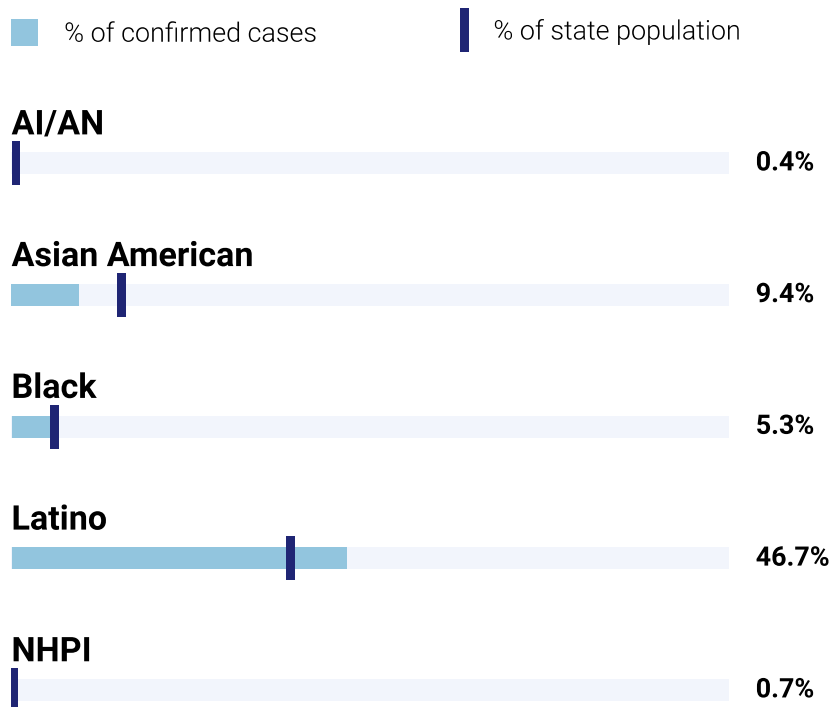
Chart information

Cases and deaths by ethnicity, gender, and age


Race and Ethnicity
Gender
Age

The distribution of confirmed COVID-19 cases reveals significant disparities within California's overall racial and ethnic demographics, with Latino and Native Hawaiian / Pacific Islander groups having a disproportionate number of cases relative to their population in the state. Additional [COVID-19 race and ethnicity data](#)  is available.

Confirmed cases by race and ethnicity in California



Confirmed deaths by race and ethnicity in California

 % of confirmed deaths % of state population**AI/AN**

0.5%

Asian American

10.9%

Black

7.0%

Latino

43.7%

NHPI**SEE MORE DETAILED DATA BY GROUP** 

0.6%

White

34.6%

Multi-race

1.6%

Other

1.1%

Vaccination data

State and county data about vaccination, including by race and ethnicity and age

Variants

Data about which variants are in California, including Delta and Omicron

Health equity data

How COVID-19 has affected different communities across the state

Data and tools

In-depth models, dashboards, data tools and information about California's COVID-19 data reporting



Hotlines and local info

Social media sharing

Safe Schools For All

Vaccinate All 58

Safer At Work

CA Notify

My Turn

COVID-19 hotline
1-833-422-4255

M-F 8AM-8PM, Sa-Su 8AM-5PM

[CA.gov](#)

[Department of Public Health](#)

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[Accessibility certification](#) [PDF](#)



EXHIBIT F

City and County of San Francisco

Carol Isen
Human Resources Director



Department of Human Resources

Connecting People with Purpose
www.sfdhr.org

COVID-19 Vaccination Policy

Issued: 6/23/2021

Amended 8/6/2021

Amended 9/8/2021

Amended 10/27/2021

Amended 01/04/2022

01/04/2022 Revision: *This revision updates the vaccination policy for city employees who work in high-risk settings.*

Pursuant to state and local health order, city employees who work in high-risk settings are required to receive a COVID-19 booster vaccine by Tuesday, February 1, 2022. If an employee is not yet eligible for a booster vaccine, they must receive the booster within 15 days after becoming eligible.

PURPOSE STATEMENT

The City and County of San Francisco (City) must provide a safe and healthy workplace, consistent with COVID-19 public health guidance and legal requirements, to protect its employees and the public as it reopens services and returns more employees to workplaces.

According to the federal Centers for Disease Control (CDC), the California Department of Public Health (CDPH), and the San Francisco County Health Officer, COVID-19 continues to pose a risk, especially to individuals who are not fully vaccinated, and certain safety measures remain necessary to protect against COVID-19 cases and deaths. Vaccination is the most effective way to prevent transmission and limit COVID-19 hospitalizations and deaths. Unvaccinated employees, interns, fellows, and volunteers are at greater risk of contracting and spreading COVID-19 within the workplace and City facilities, and to the public that depends on City services.

To best protect its employees and others in City facilities, and fulfill its obligations to the public, all employees must, as a condition of employment: (1) report their vaccination status to the City; and (2) be fully vaccinated and report that vaccination status to the City no later than either the applicable deadline under the San Francisco Health Order, if it applies, or 10 weeks after the Federal Food & Drug Administration (FDA) giving final approval to at least one COVID-19 vaccine (November 1, 2021).

LEGAL REQUIREMENTS

On June 17, 2021, Governor Newsom issued Executive Order No. N-09-21, which implements new California Division of Occupational Safety and Health (Cal/OSHA) rules, effective June 17, 2021. These rules require employers to take specific measures to protect employees from COVID-19, including enforcing masking and quarantine requirements, and offering COVID-19 testing and time off, for employees who are unvaccinated or for whom the employer does not have documentation verifying they are fully vaccinated. The Cal/OSHA rules require employers to verify and document that an employee is fully vaccinated before allowing that employee to discontinue masking indoors. For unvaccinated employees or employees for whom the City does not have documentation verifying fully vaccinated status, the City must enforce masking, provide COVID-19 testing following a close contact in the workplace or anytime they have COVID-19 symptoms, and exclude these employees

from the workplace for 10 days after a close contact. Upon request, the City also must provide non-vaccinated employees with respirators (N95 masks) and provide education about using that type of mask.

On July 26, 2021 CDPH issued an Order ([CDPH Vaccination Status Order](#)) that workers in high-risk and other healthcare settings must report their vaccination status no later than **August 23, 2021**. The CDPH Vaccination Status Order also requires routine testing and more rigorous masking for unvaccinated or only partially vaccinated personnel working in these settings.

On August 24, 2021, the San Francisco Health Officer updated the [San Francisco Health Order](#) requiring all employers to determine the vaccination status of employees who routinely work onsite in high-risk settings by no later than **September 30, 2021** and precluding unvaccinated employees from entering those facilities after that date, and precluding unvaccinated employees who may occasionally or intermittently enter those settings from entering those facilities after October 13, 2021. This order further requires employees (among others) to remain masked in the workplace, effectively superseding the Cal/OSHA COVID-19 Temporary Emergency Standard which allows vaccinated employees who had documented that status to remove their masks.

On August 3, 2021 DHR issued a revised policy Face Coverings at Work Policy that can be found here: <https://sfdhr.org/sites/default/files/documents/COVID-19/Face-Covering-Requirements-at-Work.pdf>

On August 5, 2021, CDPH issued a new Order ([Health Care Worker Vaccine Requirement](#)) mandating all workers who provide services or work in identified health care facilities to receive their final dose of a vaccine regimen *no later than* **September 30, 2021**. The only exemptions to the Health Care Worker Vaccine Requirement are for workers who have a documented and [approved exemption](#) from vaccination on the basis of a sincerely-held religious belief or due to a qualifying medical condition or restriction.

On December 22, 2021 CDPH issued an [updated order](#) requiring all healthcare workers in certain health care facilities receive a booster vaccine by **February 1, 2022**.

On December 29, 2021, The San Francisco Health Officer updated the [Safer Return Together Health Order](#) also requiring all workers in High-Risk Settings receive a booster vaccine by **February 1, 2022**. Employees who are not currently eligible for a booster vaccine, are required to receive a booster within 15 days after becoming eligible.

STATEMENT OF POLICY

Definition of “Employees” Under This Policy

For purposes of this policy only, the term “employees” includes all full, part-time, and as-needed City employees regardless of appointment type, volunteers, interns, and City fellows (such as San Francisco Fellows, McCarthy Fellows, Fish Fellows, and Willie Brown Fellows).

Definition of “High-Risk Settings”

High-Risk Settings are defined as; general acute care hospitals, skilled nursing facilities, intermediate care facilities, residential care facilities for the elderly, homeless shelters, jails, dental offices, juvenile justice centers, and pharmacies.

Requirement to Report Vaccination Status

To protect the City's workforce and the public that it serves, all City employees were required to report their vaccination status to the City by July 29, 2021 (with a subsequent extension to August 12, 2021), by providing the following information:

- employee is vaccinated (yes or no)
- For employees who are vaccinated or partly vaccinated:
- The type of vaccine obtained (Moderna, Pfizer, or Johnson & Johnson, or other vaccine received in approved clinical trials)
- Date of first dose vaccine;
- Date of second vaccine for a 2-dose vaccine;
- Declaration under penalty of perjury that they have been fully vaccinated, and
- Upload documentation verifying proof of vaccination status. Proof of vaccination can include a copy of the CDC COVID-19 Vaccination Record Card, documentation of vaccine from the employee's healthcare provider, or documentation issued by the State of California by going to: <https://myvaccinerecord.cdph.ca.gov/>

To be fully vaccinated, 14 days must have passed since an employee received the final dose of a two-shot vaccine or a dose of a one-shot vaccine. All unvaccinated employees must continue to comply with masking, testing, and other safety requirements until they are fully vaccinated and have reported and documented that status to the City consistent with this Policy. Employees who previously reported that they were unvaccinated must update their status once they are fully vaccinated.

All employees working in high-risk settings who are required to receive a booster vaccine must report their booster vaccine in the employee portal no later than February 1, 2022. Employees who are not yet eligible for a booster vaccine on or before February 1, 2022 must report their booster vaccine in the employee portal within five (5) days of receiving the booster.

Failure to comply with the reporting requirement may result in discipline, or non-disciplinary separation from employment with the City for failure to meet the minimum qualifications of the job.

How to Report Vaccination Status

Volunteers, interns, and City fellows must verify that they are fully vaccinated to the Departmental Personnel Officer or Human Resources professional by showing a copy of their CDC COVID-19 Vaccination Record Card, documentation from the individual's healthcare provider, or documentation issued by the State of California as described above. The department must retain documentation that the individual's vaccination status has been verified **but must not retain copies of the individual's vaccination record.**

All other employees must report their vaccination information and upload documentation verifying that status into the City's People & Pay system using the Employee Portal or by hand using the COVID-19 Vaccination Status Form. Only City employees authorized to access employee personnel information will have access to the medical portion of the file. The City will share information about an employee's vaccination status only on a need-to-know basis, including to the employee's department, managers, and supervisors for the purpose of enforcing masking, quarantining in the event of a close contact, and other safety requirements.

Vaccination Requirements for Employees

1. City policy requires that all City employees routinely assigned to or working onsite in high-risk settings must receive their final dose of a vaccine regimen no later than September 30, 2021, unless they have been approved for an exemption from the vaccination requirement as a reasonable accommodation for a medical condition or restriction or sincerely held religious beliefs. Any employee who is requesting or has an approved exemption must still report their vaccination status to the City by the August 12, 2021 extended deadline.

The vaccination and reporting requirements are conditions of City employment and a minimum qualification for employees who are routinely assigned to or working onsite in high-risk settings. Those employees who fail to meet the vaccination and reporting requirements under this Policy will be unable to enter the facilities and unable to perform an essential function of their job, and therefore will not meet the minimum requirements to perform their job.

2. City policy requires that all City employees who are not otherwise covered by the SF Health Order, but who provide services or work in the health care facilities identified in the state's order, must receive their final dose of a vaccine regimen no later than September 30, 2021, unless they have been approved for an exemption from the vaccination requirement as a reasonable accommodation for a medical condition or restriction or sincerely-held religious-beliefs. Any employee who is requesting or has an approved exemption must still report their vaccination status to the City by the August 12, 2021 extended deadline. The vaccination and reporting requirements are conditions of City employment and a minimum qualification for employees provide services or work in the health care facilities identified in the state's order. Those employees who fail to meet the vaccination and reporting requirements under this Policy will be unable to enter the facilities and unable to perform an essential function of their job, and therefore will not meet the minimum requirements to perform their job.
3. City policy requires that all City employees who in the course of their duties may enter or work in high-risk settings even on an intermittent or occasional basis or for short periods of time must be fully vaccinated — no later than October 13, 2021, unless they have been approved for an exemption from the vaccination requirement as a reasonable accommodation for a medical condition or restriction or sincerely-held religious beliefs. Any employee who is requesting or has an approved exemption must still report their vaccination status to the City by the August 12, 2021 extended deadline. The vaccination and reporting requirements are conditions of City employment and a minimum qualification for employees who in the course of their duties may enter or work in high-risk settings even on an intermittent or occasional basis or for short periods of time. Those employees who fail to meet the vaccination and reporting requirements under this Policy will be unable to enter the facilities and therefore unable to perform an essential function of their job and will not meet the minimum requirements to perform their job.
4. Volunteers, interns, and City fellows must be fully vaccinated – and must have reported that status and providing documentation verifying that status to the Departmental Human Resources personnel – as a condition of serving as a City volunteer, intern or fellow. Those already working and who do not fall under the SF Health Order must be fully vaccinated no later than October 13, 2021. Failure to comply with this policy will result in suspension of the

internship, fellowship, or volunteer opportunity until such time as the individual provides verification that they are fully vaccinated.

5. All other City employees must be fully vaccinated as a condition of employment within ten weeks after the FDA provides final approval to at least one COVID-19 vaccine (November 1, 2021). Employees who are not fully vaccinated by November 1, 2021 may not enter the workplace after that date. To maintain continuity of City operations, limited exceptions may be allowed for employees who demonstrate that they are partially vaccinated.
6. To comply with the updated state health order issued on December 22, 2021 and county Health Order issued December 29, 2021. Employees working in high-risk settings and eligible for the COVID-19 booster are required to receive their booster shot and report their booster vaccine status no later than February 1, 2022.
 - Employees who received their second dose of a two-dose COVID-19 vaccine before July 1, 2021 and work in a High-Risk Setting are required to receive a booster by February 1, 2022.
 - Employees who received one dose of a single dose COVID-19 vaccine prior to November 1, 2021 and work in a High-Risk Setting are required to receive a booster by February 1, 2022.

Employees working in high-risk settings who are not yet eligible for the COVID-19 booster are required to receive a booster within 15 days after becoming eligible. These employees must report their booster vaccine status within five (5) days of receiving the booster.

Employees with an approved exemption from the vaccination requirement are not required to receive a booster vaccine.

Office Environments

Departments have discretion, but are not required, to allow employees who work in office environments to work remotely provided the employees have received at least one dose of a COVID-19 vaccine regimen by November 1, 2021 and reported and documented that status to the City consistent with this Policy *and* the Department receives approval from the City Human Resources Director.

This is allowable for a maximum of up to three days (or 24 hours) per week. The remaining two days (or 16 hours), which are intended to be spent in person in the workplace, employees may use their accrued vacation or other non-sick leave time to cover those work hours that unvaccinated or partially vaccinated employees are restricted from the workplace due to not being fully vaccinated as required by City Policy. Employees who are partially vaccinated and have received written approval to work remotely after November 1, 2021 must report and document that they are fully vaccinated no later than **December 6, 2021**.

Non-office Environments

Departments have discretion, but are not required, to allow employees to enter the workplace after November 1 provided the employees are required for continuity of operations within the departments, the employees have received at least one dose of a COVID-19 vaccine regimen by November 1, 2021, and the employees have reported and documented that status to the City consistent with this Policy. Employees who are permitted at the worksite after November 1, 2021 must report and document that they are fully vaccinated no later than **December 6, 2021**.

Employees who are not fully vaccinated against COVID-19 and who are permitted in the workplace after

November 1, 2021 must continue to wear a well-fitted mask at all times while at the workplace. Departments are strongly encouraged to require employees who are not yet fully vaccinated after November 1, 2021 to test at least once weekly and provide proof of a negative COVID-19 test result until they are fully vaccinated and have reported and documented that status to the City consistent with this Policy.

Failure to comply with this Policy may result in a disciplinary action, or non-disciplinary separation from employment for failure to meet the minimum qualifications of the job.

Requesting an Exemption from the Vaccination Requirement

Employees with a medical condition or other medical restriction that affects their eligibility for a vaccine, as verified by their medical provider, or those with a sincerely held religious belief that prohibits them from receiving a vaccine, may request a reasonable accommodation to be excused from this vaccination requirement but must still report their status by the August 12, 2021 extended deadline. The City will review requests for accommodation on a case-by-case basis and engage in an interactive process with employees who submit such requests. For some positions where fully vaccinated status is required to enter the facility where the employee works, an accommodation may require transfer to an alternate vacant position, if available, in another classification for which the employee meets the minimum qualifications. Requests for Reasonable Accommodation forms and procedures can be found here: <https://sfdhr.org/new-vaccine-and-face-covering-policy-city-employees>

**COVID-19 VACCINATION COMPLIANCE DEADLINES
ADDENDUM TO VACCINATION POLICY AMENDED AUGUST 5, 2021**

Below are the vaccination status reporting deadlines for City employees.

COVID-19 VACCINATION STATUS REPORTING DEADLINES	
July 29, 2021	Reporting Deadline
August 12, 2021	Grace Period - Final day to report vaccination status

Below are the vaccination deadlines for City employees. City employees working in high-risk settings are subject to non-disciplinary release if not vaccinated by the deadlines referenced below for failure to meet the minimum qualifications of their jobs

COVID-19 VACCINATION DEADLINES BY EMPLOYEE TYPE	
Employees who are assigned to or routinely work onsite in High-Risk Settings or other Health Care Facilities	<p>Must receive their final dose of a vaccine regimen no later than September 30, 2021 and receive and report booster vaccination, <i>if eligible</i>, by February 1, 2022.</p> <ul style="list-style-type: none"> • Moderna: First shot no later than September 2, 2021; Second shot no later than September 30, 2021. <i>Eligible to receive booster vaccine if primary vaccine series was completed before July 1, 2021</i> • Pfizer: First shot no later than September 9, 2021; Second shot no later than September 30, 2021. <i>Eligible to receive booster vaccine if primary vaccine series was completed before July 1, 2021</i> • Johnson & Johnson: First shot no later than September 30, 2021. <i>Eligible to receive booster vaccine if primary vaccine was completed before November 1, 2021</i>
Employees intermittently or occasionally working in "High-Risk Settings"	<p>Must be fully vaccinated <i>no later than</i> October 13, 2021 and receive and report booster vaccination, <i>if eligible</i>, by February 1, 2022.</p> <ul style="list-style-type: none"> • Moderna: First Shot no later than September 1, 2021; Second Shot no later than September 29, 2021 <i>Eligible to receive booster vaccine if primary vaccine series was completed before July 1, 2021</i> • Pfizer: First Shot no later than September 8, 2021; Second Shot no later than September 29, 2021 <i>Eligible to receive booster vaccine if primary vaccine series was completed before July 1, 2021</i> • Johnson & Johnson: First Shot no later than September 29, 2021 <i>Eligible to receive booster vaccine if primary vaccine was completed before November 1, 2021</i>
All other employees not working in "High-Risk" or other health care settings	<p>Must be fully vaccinated <i>no later than</i> November 1, 2021.</p> <ul style="list-style-type: none"> • Moderna: First shot <i>no later than</i> September 20, 2021; Second shot <i>no later than</i> October 18, 2021. • Pfizer: First shot <i>no later than</i> September 27, 2021; Second shot <i>no later than</i> October 18, 2021. Johnson & Johnson: First shot <i>no later than</i> October 18, 2021. <p>For continuity of City operations limited exceptions may be made for partially</p>

EXHIBIT G



COVID-19 VACCINE AND FETAL CELL LINES

In various stages of vaccine development and manufacturing, some of the COVID-19 vaccines used cells originally isolated from fetal tissue (often referred to as fetal cells), some of which were originally derived from an aborted fetus. The use of fetal cell lines is a very sensitive and important topic within some faith communities and among individuals with concerns about the ethics of using materials derived in this way.

It is crucial for everyone to have all of the appropriate information to make a fully informed decision regarding COVID-19 vaccination. For those with questions or concerns about the use of fetal cell lines in vaccine development, please view the information presented in this handout and keep the following considerations in mind when making your vaccine decision:

- For us to break the chain of disease transmission and protect our community from COVID-19, we will need the vast majority of the public to get vaccinated against the virus.
- Vaccinating not only protects you, but may also protect your family, friends, and those in our community most vulnerable to severe disease from COVID-19.
- The risks and benefits of COVID-19 vaccination will vary from person to person, and individuals may want to consider discussing this with their own healthcare provider.
- Several religious and bioethics groups have reviewed and commented on the ethical considerations of receiving the current COVID-19 vaccines. Many of those considerations are cited below.
- While vaccine supply remains limited, you may not be given a choice on which COVID-19 vaccine you can receive.
- Individuals may want to consider having a personal conversation with their faith leader or someone experienced in bioethics.

Why are fetal cells used to make vaccines?

Historical fetal cell lines were derived in the 1960's and 1970's from two elective abortions and have been used to create vaccines for diseases such as hepatitis A, rubella, and rabies. Abortions from which fetal cells were obtained were elective and were not done for the purpose of vaccine development.

The fetal cell lines being used to produce some of the potential COVID-19 vaccines are from two sources:

- HEK-293: A kidney cell line that was isolated from a fetus in 1973 ([undisclosed origin](#), from either a spontaneous miscarriage or an elective abortion)
- PER.C6: A retinal cell line that was isolated from an aborted fetus in 1985

Any vaccine that relies on these historic cell lines will not require nor solicit new abortions.

To develop and manufacture some vaccines, pharmaceutical companies prefer human cell lines over other cells because 1) viruses need cells to grow and the viruses tend to grow better in cells from humans than animals (because they infect humans), 2) fetal cells can be used longer than other cell types, and 3) fetal cells can be maintained at low temperatures, allowing scientists to continue using cell lines from decades ago. While fetal cell lines may be used to develop or manufacture COVID-19 vaccines, the vaccines themselves **do not contain any aborted fetal cells**. A comprehensive list of COVID-19 vaccines in development and any connection to abortion-derived cell lines is available [here](#).





COVID-19 VACCINE AND FETAL CELL LINES

Were the Pfizer and Moderna COVID-19 vaccines developed using fetal cell lines?

The mRNA COVID-19 vaccines produced by Pfizer and Moderna **do not require the use of any fetal cell cultures in order to manufacture (produce) the vaccine.**

Early in the development of mRNA vaccine technology, fetal cells were used for “proof of concept” (to demonstrate how a cell could take up mRNA and produce the SARS-CoV-2 spike protein) or to characterize the SARS-CoV-2 spike protein.

The Pfizer and Moderna vaccines were found to be **ethically uncontroversial** by the pro-life policy organization [the Charlotte Lozier Institute](#). Further, the [Secretariat of Pro-Life Activities](#), a committee within the United States Conference of Catholic Bishops, has stated: “neither Pfizer nor Moderna used an abortion-derived cell line in the development or production of the vaccine. However, such a cell line was used to test the efficacy of both vaccines. Thus, while neither vaccine is completely free from any use of abortion-derived cell lines, in these two cases the use is very remote from the initial evil of the abortion...one may receive any of the clinically recommended vaccines in good conscience with the assurance that reception of such vaccines does not involve immoral cooperation in abortion.”

Was the Johnson & Johnson (Janssen Pharmaceuticals) COVID-19 vaccine developed using fetal cell lines?

The non-replicating viral vector vaccine produced by Johnson & Johnson **did require the use of fetal cell cultures, specifically PER.C6, in order to produce and manufacture the vaccine.** The [Catholic Church](#) and the [Southern Baptist Ethics & Religious Liberty Commission](#) have both stated that **receiving a COVID-19 vaccine that required fetal cell lines for production or manufacture is morally acceptable.** The [U.S. Conference of Catholic Bishops](#) goes further and has stated: “receiving a COVID-19 vaccine ought to be understood as an act of charity toward the other members of our community. In this way, being vaccinated safely against COVID-19 should be considered an act of love of our neighbor and part of our moral responsibility for the common good...Given the urgency of this crisis, the lack of available alternative vaccines, and the fact that the connection between an abortion that occurred decades ago and receiving a vaccine produced today is remote, inoculation with the new COVID-19 vaccines in these circumstances can be morally justified.”

On March 2nd, 2021, the U.S. Conference of Catholic Bishops issued a statement which addressed the use of Johnson & Johnson’s COVID-19 vaccine. The Bishops [stated](#): “if one can choose among equally safe and effective COVID-19 vaccines, the vaccine with the least connection to abortion-derived cell lines should be chosen. Therefore, if one has the ability to choose a vaccine, Pfizer or Moderna’s vaccines should be chosen over Johnson & Johnson’s...While we should continue to insist that pharmaceutical companies stop using abortion-derived cell lines, given the world-wide suffering that this pandemic is causing, we affirm again that being vaccinated can be an act of charity that serves the common good.”

The [Catholic Church](#) has stated, “Those who, however, for reasons of conscience, refuse vaccine produced with cell lines from aborted fetuses, must do their utmost to avoid, by other prophylactic means and





COVID-19 VACCINE AND FETAL CELL LINES

appropriate behavior, becoming vehicles for the transmission of the infectious agent. In particular, they must avoid any risk to the health of those who cannot be vaccinated for medical or other reasons, and who are the most vulnerable.”

Where can I find more information?

Some religious groups and bioethics institutes that oppose the use of aborted fetal cells in the development or manufacturing of vaccines have noted that individuals may ethically receive these vaccines when there are no ethically derived alternatives.

For more information from these groups on this issue, check out the following links:

- [National Catholic Bioethics Center](#)
- [Pontifical Academy of Life Statement](#)
- [United States Conference of Catholic Bishops](#)
- [The Vatican – Congregation for the Doctrine of the Faith](#)
- [The North Dakota Catholic Conference](#)
- [Charlotte Lozier Institute](#)
- [The Pillar – The ultimate Catholic coronavirus vaccine morality explainer](#)

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Find the latest [information on COVID-19](#) and view updated [visitor guidelines](#).

310-825-2631



Search



[Home](#) ▶ [COVID-19 Info](#) ▶ Addressing Concerns

COVID-19 Vaccine: Addressing Concerns

There is a lot of information — and misinformation — out there about coronavirus and the COVID-19 vaccine, and it can be difficult to know where to go to get answers to common questions.

The below information specifically addresses concerns about the COVID-19 vaccines. This information is backed by science and reviewed by UCLA Health experts in infectious diseases, internal medicine, and other medical specialties.

You can find more information on the [main coronavirus page](#) and the [vaccine info hub](#).

Please talk to your [primary care physician](#) if you have questions specific to your care.

En Español:

La información en esta pagina trata específicamente las preocupaciones sobre las vacunas COVID-19. Esta información está respaldada por la ciencia y revisada por expertos de UCLA Health en enfermedades infecciosas, medicina interna y otras especialidades médicas. Haga clic en el botón de abajo para leer en español.

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Is the COVID-19 vaccine safe?

The FDA has confidently said that the Pfizer, Moderna and Johnson & Johnson vaccines are safe, and has authorized them for emergency use. People who receive the vaccine will be monitored to check for safety, and participants in the original clinical trials will be followed for two years.

We understand there may be skepticism about the COVID-19 vaccine, especially among people of color, because of historical medical racism and experimentation in people of color. The COVID-19 clinical trials included people of all racial and ethnic backgrounds, and the vaccines were found to be safe and effective for all participants.

Can I get COVID-19 from the vaccine?

No. You cannot become infected with SARS-CoV-2, the virus that causes COVID-19, from any of the vaccines.

The COVID-19 vaccines...

- **Do not** contain the virus that causes COVID-19.
- **Cannot** give you COVID-19.
- **Do not** affect your DNA.
- **Do not** contain eggs, preservatives or mercury.
- Mild side effects are common after vaccination as the body produces antibodies. This is not a sign of infection. These are signs that the body is building protection from the virus and will only last a few days.

Can the COVID-19 vaccine alter my DNA?

No. There is no way for the COVID-19 vaccine to alter your genetic material (DNA).

The Pfizer and Moderna vaccines use messenger RNA (mRNA) technology. RNA is a short-lived, temporary messenger, and it only w
interact with your DNA and never er

The Johnson & Johnson vaccine use
(adenovirus 26) is engineered to co
someone gets this shot, their body r
prevent them from a future severe C

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vector does not interact with your DNA.

Should I be worried about an mRNA vaccine? Is this a new technology?

Messenger RNA (mRNA) vaccine technology, used in the Pfizer and Moderna vaccines, is new, but not unknown. While this is the first time mRNA has been used in a licensed vaccine, the structure and technology have been studied for years. Advancements in biology and chemistry have improved mRNA vaccine safety and efficacy, and it is now thought to be *less* dangerous than other types of vaccines.

Do the COVID-19 vaccines contain aborted fetal cells?

No, the COVID-19 vaccines do not contain aborted fetal cells. However, Johnson & Johnson did use fetal cell lines — not fetal tissue — when developing and producing their vaccine, while Pfizer and Moderna used fetal cell lines to test their vaccines and make sure that they work.

Fetal cell lines are grown in a laboratory and were started with cells from elective abortions that occurred several decades ago in the 1970s-80s. They are now thousands of generations removed from the original fetal tissue. None of the COVID-19 vaccines use fetal cells derived from recent abortions.

We understand this is a sensitive issue, and specifically important to religious communities. We'd like to provide some additional context on this topic. On Jan. 27, the [California Catholic Conference noted in an official statement](#) that they support the use of all COVID-19 vaccines, including the Johnson & Johnson vaccine, to prevent the continued spread of COVID-19. Pope Francis also publicly supported COVID-19 vaccination and the Vatican has issued a [statement](#) saying it is morally acceptable to receive COVID-19 vaccines that have used cell lines from aborted fetuses in their research and production process.

Was the vaccine made too quickly?

No, the vaccines were not made too quickly. During the pandemic, vaccine experts focused on pre-existing vaccine models that had been studied for years.

Each vaccine was developed and tested thoroughly. All three vaccines that have been approved for emergency use have been shown to be safe and effective.

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Should I be concerned that the government was involved in creating the vaccine?

No. The vaccine was created by expert scientists, not the government. The U.S. government provided money and support to assist in the production and distribution of the vaccine.

The vaccine does not contain a live or whole virus, microchip, or any other harmful items. Each vaccine was developed and tested following the same rules as other medications and vaccines that have been approved for use, such as antibiotics and the flu shot.

Can the COVID-19 vaccine cause infertility or sterility?

No. There's absolutely no evidence that the vaccine interferes with fertility or pregnancy.

The vaccine includes only one protein of the virus, which causes your immune system to respond against it. This is something our bodies are used to — it happens every day.

Can the COVID-19 vaccine cause autoimmune problems in the future?

There is no evidence that the COVID-19 vaccine will cause autoimmune problems. The immune response caused by the vaccine only targets the spike protein of the virus, not the other cells in your body.

Why is there a new focus on vaccinating Black, Latino, and Indigenous people? Do they want to use us as "guinea pigs?"

No. The vaccines were rolled out in an equitable and orderly way. However, additional vaccine educational outreach is being made to communities of color to help stop the high rates of COVID-19 infection, hospitalizations, and death seen in Black, Latino, and Indigenous people.

The US has a history of medical racism. The National Research Act of 1974 outlines the importance of research on Black, Latino, and other vulnerable groups.

The COVID-19 vaccines were created by Black, Latino, and Indigenous doctors and scientists of color, including Dr. Kizzmekia Collier, who is a Black woman and a leading expert on the virus.

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vaccines were tested in people of different racial and ethnic backgrounds and was found to be safe and effective.

The COVID-19 vaccines have been endorsed by the National Medical Association and the National Hispanic Medical Association, the country's leading organizations of Black and Latino doctors.

What do I need to know about myocarditis related to the COVID-19 vaccine?

Myocarditis is an inflammation of the heart that can occur after infections, including viral illnesses. A small number of adolescents and young adults reported experiencing mild heart problems after receiving a mRNA COVID-19 vaccine (Pfizer and Moderna), that turned out to be myocarditis.

- These patients were predominately male, especially in younger age groups
- More cases were reported after the second dose than the first dose
- Symptoms usually developed within 2-3 days of vaccination

[The CDC is currently evaluating the data on myocarditis](#) to assess the benefits versus the risks. They continue to recommend COVID-19 vaccines for everybody 12 and older.

What about the variants?

There are several variants the CDC is actively tracking. One of them, called the **Delta variant**, is **much more contagious** than earlier strains of SARS-CoV-2, the virus that causes COVID-19.

The good news? Vaccines still offer significant protection against Delta and other variants. Most people who are getting COVID-19 now are *unvaccinated*.

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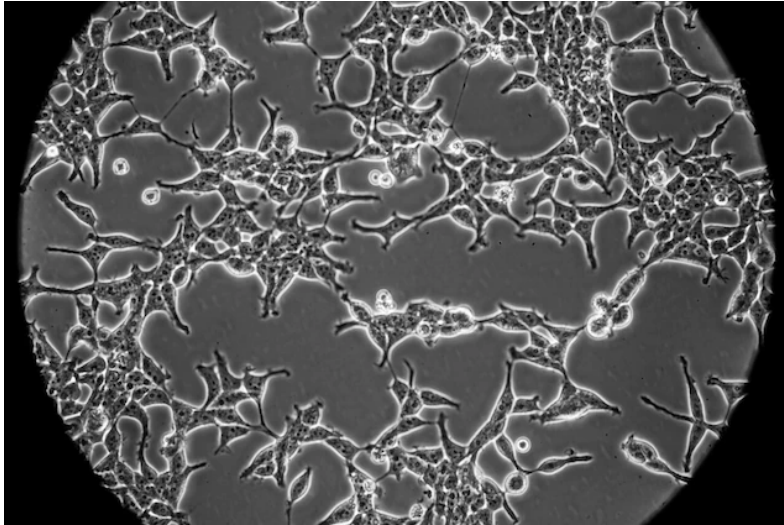
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Several clusters of Human Embryonic Kidney 293 cells in culture. These cells are a standard tool in biomedical research and drug development.

IMAGE BY GERMAN101, GETTY

[SCIENCE](#)[CORONAVIRUS COVERAGE](#)

Here are the facts about fetal cell lines and COVID-19 vaccines

As more people apply for religious exemptions to vaccine mandates, experts explain how and why fetal cells are used in drug development,

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BY PRIYANKA RUNWAL



PUBLISHED NOVEMBER • 8 MIN
19, 2021 READ

In the wake of federal vaccine mandates in the U.S., debate has erupted over the waves of fire fighters, police staff, and other workers who have applied for religious exemptions to getting their COVID-19 shots. The number of applications is likely to spike as the January 4 vaccination deadline nears for large private businesses and some healthcare facilities. And one common reason people give for religious exemptions is the link between vaccines and human fetal cells.

It's true that such cells have been used either in the testing or development and production of COVID-19 vaccines. The cells are grown in a laboratory and were derived from a few elective abortions performed more than three decades ago. These same cell lines are also used to test and advance our understanding of several routine drugs, including acetaminophen, ibuprofen, and aspirin, and they continue to be used for treatment research in diseases such as Alzheimer's and hypertension.

“So many people don't realize how important fetal cell lines are to develop life-saving

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expert at Johns Hopkins Center for Health Security. “Their use in developing COVID-19 vaccines isn’t anything different or special.”

For some religious leaders, the science is informing their recommendations. In a December 2020 [statement](#), the U.S. Conference of Catholic Bishops referred to these cell lines as morally compromised for their connection, albeit remote, with abortions. But they reiterated the message from the Vatican justifying the use of vaccines, lacking alternatives, as an act of charity and moral responsibility in situations of serious health danger, such as the COVID-19 pandemic.

Although it’s unclear how many religious exemptions for COVID-19 shots have been granted so far, those applying are required to prove “religious sincerity” and in some cases attest that they will also avoid the routine drugs developed using fetal cells.

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But doctors worry that some people’s objections may stem in part from

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University of Pittsburgh School of Medicine and a part-time physician at Pittsburgh's East Liberty Family Health Care Center, says that some of his patients have voiced scepticism because they believe the COVID-19 vaccines contain cells from aborted fetuses. This is incorrect.

Here is the history of how fetal cells are used in drug development, where the cells come from, and why it's been so hard to find alternatives.

Why are fetal cells necessary for drug development

Unlike bacteria, viruses need a host to survive; they can only grow and reproduce inside the host cells they infect. Vaccines typically deliver small doses of weakened or inactivated versions of the virus, or key parts of it, to give the host body a preview of the pathogen without causing illness. This enables the immune system to remember a specific virus and how to destroy it if the body ever encounters the germ in the future.

To mass produce vaccines, manufacturers need a way to make enormous quantities of the viral components.

Scientists use fertilized chicken eggs, for

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vaccines manufacturers prefer to grow the virus in mammal cells, mainly because they help prevent the virus from mutating and help scale production.

In the early days, scientists used animal cells. But they later realized that these cells can harbor other undesirable animal viruses, which would then contaminate the vaccine. For instance, an early version of the polio vaccine administered extensively between 1955 and 1963 was produced using monkey cells. But scientists later found out the cells were contaminated with a monkey virus called SV40.

The other issue was that some human viruses didn't grow as well in non-human animal cells. So scientists turned to human fetal cells to produce vaccine viruses.

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“They were known to rarely contain contaminating viruses,” says cell biologist Leonard Hayflick at the University of California, San Francisco. He created the

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1960s. Hayflick knew that human fetal cells, unlike adult human cells, were less likely to contain unwanted viruses.

Over the years, though, scientists have identified other animal cells that could be safely used to develop vaccines against certain viruses. African green monkey kidney cells, for instance, have been used to develop several vaccines, including certain ones for polio and smallpox.

But especially with new human viruses, “there is preference for using a human cell line,” says Alessondra Speidel, a biomaterials scientist at Sweden’s Karolinska Institute, possibly because they’re likely to infect and grow better in human than animal cells.

Where do fetal cells come from?

To create fetal cell strains, scientists must isolate millions of cells from tiny pieces of tissue collected from a dead embryo. Each cell can divide into two nearly 50 times. And these cells can be frozen—or in some cases, immortalized—so that today the cells being used come from tissue collected decades ago.

Hayflick, for instance, has frozen ten million human fetal lung cells—derived from one

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times. Given their potential to continue doubling at least another 30 times, each vial can yield “tens of thousands of kilos of cells,” he says. “That’s enough cells to supply the world's vaccine manufacturers with WI-38 cells for several years.” These lung cells are currently used to produce vaccines for varicella, rubella, hepatitis A, and rabies. Other scientists have transformed fetal kidney and retinal cells so that they become immortal, dividing forever. The PER.C6 cell line, for instance, is derived from immortalized retinal cells from an 18-week-old fetus aborted in 1985.

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Johnson & Johnson uses PER.C6 to produce its COVID-19 vaccine. The company used these cells to grow adenoviruses—modified so that they wouldn’t replicate or cause disease—that were then purified and used to deliver the genetic code for SARS-CoV-2’s signature spike protein. The J&J vaccine does not contain any of the fetal cells that once housed the adenovirus because they were extracted and filtered out.

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line, HEK-293, derived from the kidney of a fetus aborted in the 1970s. The cells were used during development to confirm that the genetic instructions for making the SARS-CoV-2 spike protein worked in human cells. This was like a proof-of-concept test, Speidel says, and the fetal cells were not used to produce either of these mRNA vaccines.

“The issue is whether one believes that it is ethically acceptable to develop and use life-saving medicines, vaccines, and treatments that are dependent on a cell line that was created using aborted human fetal cells a half century ago,” says Frank Graham, a molecular virology and medicine expert and emeritus professor at Canada’s McMaster University, who created the HEK-293 cell line.

Even if future vaccines can somehow avoid the use of these fetal cell lines, it’s hard to ignore their foundational role. The same applies to the widespread use of these cells in studying several common diseases like diabetes and hypertension and advancing their treatments.

And beyond the science, the message that has resonated most with several of Zimmerman’s vaccine-hesitant patients is one of altruism.

“Nobody wants to be the one who triggers an

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Editor's Note: This story has been updated to clarify that fetal cell lines are used in research on the generic pain reliever acetaminophen.

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